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ADDRESS.

A GENERAL PRACTITIONER'S VIEW OF THE CAUSES AND PREVENTION OF INSANITY.

The Address in Mental Disorders, Delivered at the Thirty-Seventh Annual Meeting of the Medical Society of the State of Pennsylvania, June 3, 1886.

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The appointment to deliver the address in mental disorders, which I had the honor to receive at our last session, came to me unsought and undesired. I am as mindful as any of my colleagues can possibly be, how ably this appointment has been filled during previous years—filled by experts in mental disorders, by members of the Association of Medical Superintendents of Insane Asylums, and by recognized authorities in this great Specialty of Medicine. To follow such predecessors on this occasion, in some way that may justify one who is only a general practitioner of medicine, in speaking of what most intimately concerns a select few of his colleagues—and to address this learned body upon a specialty which each of us, for long years past, has been accustomed to consider as under the guardianship of its own appointed medical "keepers"—seems to me difficult of accomplishment, and the very undertaking liable to be considered almost an impertinence. Under these circumstances I must ask your indulgence, reminding you that this duty was imposed upon me by our President, and that I am endeavoring to make a contribution to the common fund of our medical experience, if not in my own chosen direction, at least in the way assigned me. The willing obedience to lawful authority which has always distinguished the members of this Society, must be my excuse and reason for this address.

I propose to make some remarks upon the "Causes and Prevention of Insanity," as seen from the outside point of view of the general practitioner. Most medical men are wont to give thought to these topics—to discuss them with themselves and with their colleagues—on account of the apparent steady increase of mental maladies for years past. To most observing men in the profession the increase of insanity seems out of due proportion to the increase of general disease. An ever greater ratio of the population of our Commonwealth is annually brought under treatment for mental alienation. The number of hospitals has been increased—private institutions have been multiplied—and the number of the insane who are treated in county almshouses does not perceptibly diminish. The causes of the increase of mental disorders require to be carefully sought out, and if possible, remedied. To the average general practitioner the study of prevention seems to be our chief need. To search out the causes of the mischief and eradicate them, seems also to be a duty which we can share with the alienist physicians. In this quarter seems to appear, if not the only, at least the chief hope, in our struggle against the spread of insanity.

The cure of an established mental alienation, by even the best hospital treatment, does not occur in any very satisfactory ratio to the whole number of cases treated. It is feared that the frequently claimed 40 per cent. of cures does not usually result from treatment. I am well satisfied that, of all the cases sent by me (or known by me to have been sent) to hospitals for the insane, in the last thirty years, an average of 20 per cent. would more nearly represent the number who have been restored to mental health and usefulness. Let me repeat the statement in another form, and say that in my own experience, 80 per cent. of the insane whom I have known treated in hospitals, have never recovered. This is a sad commentary on the inefficiency of our best directed efforts. It is a disheartening return of the results of the vast expenditure lavished on our public institutions, where no sanitary or hygienic measures are omitted, and where no medical or surgical skill is spared the afflicted patients.

And if this be true of our admirable public asylums, how much darker a picture could be drawn (and drawn from the life) of their condition and prospects who linger out a forlorn and distracted existence in county almshouses, or in private dwellings—restrained of their liberty, unoccupied, uncheered by social amusements, unheeded too often—a heavy burden, and an illy tolerated curse, upon the household or the community. What a fearful percentage of uncured would we reckon from the class of these unfortunates, if their statistics could be gathered together and read before us to day!

But there is a still more unfortunate class of the insane. Every now and again the sensibilities of our common humanity are shocked, and swift indignation thrills every fibre, at a revelation of cruel bondage and solitary suffering, in squalor, filth and mental misery, of some poor lunatic; hidden away (chained

down perhaps) by a brutal and cowardly keeper, coarsely fed, ill-treated, and subjected to whatever injuries are most calculated to bruitalize and degrade him. Dragged to the light of public knowledge, such wrongs are swiftly ended; but how many similar cases may we not suppose to have never seen the light—how many more such unfortunates, who lived some such existence of misery, and died unrecorded in insane statistics—never to be known till "the books are opened" and the recording angel unfolds the fearful history of their sufferings. In such cases as these, be they many or few, there is no cure. For them there is no percentage of recovery. "Death comes to set them free."

Into such a practical classification as that just given, the insane of our great Commonwealth may be placed, and the medical profession has its special duties with reference to each. The class last-named should not be allowed to exist among us, to disgrace our humanity and civilization. To right the distresses of these sufferers, no exertion should ever be spared. Whenever such cases are discovered, in our daily visitations from house to house, at whatever cost of personal trouble, or even of obloquy, the aid of the law should be invoked, and the power of public opinion be aroused to deliver from worse than death these helpless victims of "man's inhumanity to man." The only measure of our duty is the extent of our ability. When we have done our utmost, at every hazard, then only may we rest content.

The insane of our public institutions are the fortunate recipients of the full measure of the most enlightened methods of treatment and means of cure. We are released from responsibility, as far as they are concerned, when we have secured their admission to the asylum or hospital. Nevertheless we are not relieved from the duty of personal sympathy with their condition. Such frequent inspection of public institutions, and conferences with their medical officers, as will manifest our interest, and refresh our general knowledge of modern methods in the treatment of insanity, are necessary to keep us *en rapport* with that devoted body of medical men, who illustrate the annals of the profession by spending their time, their abilities and their lives in mitigating the direst woes that can befall humanity.

There remain the pauper insane of county almshouses. The late laws enacted for their protection, have need to be rigidly enforced. The inspections of the local boards, appointed to assist the State Board of Charities, are most valuable in this direction. But they should be reinforced, everywhere, by an affiliated committee of the County Medical Society. The insane poor need medical guardianship, and it can not be better afforded than by our County Medical Societies. By regular and by unexpected visitations and reports, and by appeals to the proper authorities, founded on such medical inspections, it will become possible to obtain, under the law, despite the parsimony of Directors of the Poor in such matters all necessary accommodations and means of cure for the pauper insane. It should not be permitted that these unfortunate sufferers be left in careless, unfeeling and unskilled hands. Each county medical society should endorse or condemn as a sacred duty, the men and the methods, by which cure is or is not, successfully conducted. Every county almshouse should be forced to take as good care of its insane inmates as is done in our public hospitals for the insane. This should be the aim. No less should be asked or accepted. And it is for the medical profession to accomplish this great work. It is ours by virtue of our calling, by our humanity, by our knowledge and by our proper leadership in every movement which looks toward the improvement of the physical or mental condition of men. But we must proceed with our main consideration. If we find cure so infrequent, remedies so uncertain, and the increase of mental maladies so progressive, what can be done to prevent their development in the community? Has not insanity evident causes which may be studied to such purpose that, being forewarned, we may also be forearmed against them? It seems to be evident that the study of statistics affords but little aid to this inquiry. They are too imperfect to be reliable, and need to be supplemented by accurate study of each separate case submitted, to become really trustworthy evidence.

The only scientific method would seem to be to regard insanity as a part of the diseases of the nervous system, and to study its causes as related to (and inseparably connected with) those general, constitutional conditions which medical practitioners have learned to recognize as causes of general nervous derangements. The physician who has been accustomed to treat hysteria, epilepsy, hypochondriasis, delirium, spinal and cerebral scleroses, paralysis agitaus, chorea, *et id genus omne*, and who has carefully studied the exciting and the predisposing causes in these other nervous disorders, should be qualified to speak with some authority of the causes of insanity. Related anatomically as they are, by their seat in the nervous tissues, they are also related by virtue of common constitutional causation. For insanity is not a simple or single condition of disease, but under that term is comprised as large a number of diseased states of the brain as is to be found in the general nervous system itself, among diseases which I have just enumerated. It is only because of the predominent symptom of mental defect or disorder, that such varied diseased conditions of the brain are comprehended under the general term, insanity.

What, then, is the most prominent fact which impresses itself on the observation of medical men, as to the causation of nervous diseases? I answer the existence of a family constitution tending to nervous instability, materially influencing the development of the nervous system, and making itself felt by a tendency to degenerative changes in the nervous tissues. Such neurotic diatheses renders its subjects liable to break down under stress of circumstances which would not affect persons of a different constitution. How many of us have been acquainted with families, whose members have illustrated the close relation of nervous diseases, by exhibiting examples of a great many of them within their family circle? Let me cite, by way of example, a father affected with locomotor ataxy, one of his children dying of tubercu-

lar meningitis, another stricken with epilepsy, a third having hysterical hip-joint, a fourth experiencing attacks of aphasia, a fifth becoming a confirmed dipsomaniac, and the sixth a victim of chronic mental disorders. This family was, for a long period, under my personal medical care, and I studied their cases with the greatest interest. Surely there is no difficulty here, in recognizing the correlation of the various nervous diseases with insanity. For such widespread family disaster I found no other common cause than an inherited neurotic diathesis—and there certainly was none. Take another set of cases, also within my own knowledge, which will illustrate this point still further. A mother died of dementia, her son is the victim of chronic alcoholic excess, one daughter died of convulsions, a grandchild has infantile paralysis, a second succumbed to meningitis.

But it seems unnecessary to multiply these family histories. They are well recognized by numbers of general practitioners as proofs of the inherited neurotic diathesis being the chief cause of nervous diseases.

Let us look at another constitutional state as a fruitful cause of insanity, viz. syphilis. Many cases of the so-called general paralysis of the insane are instances (as proved *post-mortem*) of syphilitic disease of the brain. Under the same causation of syphilis may be classed much of the traumatic insanity met with. The chronic slumber of constitutional specific disease is wakened into activity by a blow on the head—the traumatism only being the *exciting* cause. In such instances, the constant headache—the outbreaks of violent rage—the strabismus—the locomotor disturbances—all point to intra-cerebral pressure. Mental disorder soon becomes manifest. Epileptiform convulsions mark the advanced stage. When death allows the cerebral lesions to be investigated, there is often found the syphilitic gumma and degenerative arterial changes, to explain why insanity followed perhaps an apparently trivial injury. In this connection I may refer to Dr. H. C. Wood's paper on "Traumatism as a Cause of Cerebral Syphilis," as a most valuable contribution to our knowledge of the subject.

To make practical use of these truths in the prevention of insanity, if we can treat families with the neurotic diathesis in such a manner as to improve the general health, to strengthen the nervous system, and to remove sources of peripheral irritation, there is reason to hope that many causes of possible insanity may be prevented from becoming effective in such families, under medical care. And, first in order, we must begin with the children. Homes must be regulated under every hygienic precaution. Attention must be paid to the food—personal habits of cleanliness, open-air exercise, and early hours of sleep must be insisted on—and suitable amusements must be provoked for their recreation. Over-work, whether of body or mind, must be avoided. The over-wearied body is an easily sickened body. It responds too readily to depressing influences. It suffers too keenly from external irritations. The over-wearied mind is even a more serious disaster in subjects of the neurotic diathesis. The strain of modern methods of education often needs to be relaxed. The public school system has become too much a children's tyranny. The uniformity of attainment exacted, from weak and strong alike, the prolonged hours of sedentary mental labor, the competitive system of marking and examination, the worry of a feeble mind in trying to study at a rate beyond its capacity, the insufficient time allowed during school hours for recreation and physical exercise, and the mental distress of sensitive, neurotic children under punishment or threats of punishment—all combine to make the system of public school drill and discipline, too often a remorseless engine of mental torture. For the pace must be kept up, the slow must travel with the fast, the weak must wrestle as do the strong, whether it develop or whether it exhaust the fibre.

Above all, therefore, it behooves the family physician in neurotic families to take oversight and authority in educational matters, and to protect the children from the consequences of undue mental work and worry. Then we may expect nervous distress and nervous diseases to diminish among them, and insanity to be often disappointed of a ready prey.

In the case of older members of neurotic families, over-work means also over-worry. Ambition, anxiety, disappointment wear out the fine temper of the mind. A state of unstable equilibrium results, and too often degeneration of brain structure is the result of the unequal struggle, when too long protracted. Given a naturally feeble mental machinery, and the determining causes of its loss of working power are over-work, with consequent diminished periods of necessary rest and recreation. Let every medical man give the utmost attention to the prevention of these exciting causes of brain disease, for they are first in importance. Next to these follow the abuse of stimulants and narcotics, which has much to do among the excitable and irritable American people with the aggravation or even calling into activity the tendencies to insanity. The first abuse of these agents is in their too early use. Boys too soon acquire the habit of indulgence in tobacco. Young men too early habituate themselves to indulgence in alcoholic stimulation which unhinges the mental machinery by direct injury to the brain tissues. Undue excitation brings rapid exhaustion. Local brain congestions, transient though they be, at last induce structural degenerations, and in chronic alcoholism (independently of gouty insanity, which I have had occasion to see) dementia from softening will often be found to occur. Lastly, among the exciting causes which act upon the neurotic constitution to induce insanity, are those which are purely mental as distinguished from physical causes.

In the keen strife for wealth, for political success, and even for livelihood, are to be found many of the events which determine the wreck of the mental forces. Among them we may enumerate the tremendous strain of speculative operations in the stock markets, with their hourly fluctuations in values, unforeseen and unmanageable, which make all the difference between ruin and opulence, between wealth to-day and beggary to-morrow. In the political arena

we can to-day trace the results of a protracted national contest, with its accomplished overthrow of the dominant party, the consequent loss to so many office-holders of place and means of support, while on the other hand, there is eager pursuit of office by numbers of needy men, who only meet bitter disappointment or anxious delay. And in the pursuit of the ordinary means of livelihood we have seen the laboring classes engaged in fierce and protracted contests with their employers— labor and capital at war —under circumstances which inflame the fiercest passions to the utmost tension, and inflict long periods of sorest distress upon the community. All the wear and tear of the cruel mental suffering which these events bring with them, intensified by the mobile and irritable national character, are constantly trying to the utmost the mental endurance of our people. Hundreds go down under the stress of such circumstances, after having experienced the fluctuations of hope, doubt, anguish an despair for weary months— buffeting the waves which finally engulf them, when there is no longer strength left to struggle.

It seems to be timely, in view of all these considerations, for medical men to sound the note of alarm, and to call the attention of those under their influence to the dangers to mental stability involved in American modes of life. Men must be advised to moderate their pursuit of wealth, to put away inordinate ambition, to shun the fierce conflicts of partisan politics, and to avoid being involved in labor disturbances that tend to civil war. We must insist that violent excitements and great anxieties can not be successfully endured, and that the choice of a life which involves constant subjection to those evils is a folly, and may be a crime.

It is well, at this era of our national life, for the doctor of medicine to *be* what his title implies, a teacher; and to combine, as was done in distant ages, the sacred offices of physician and of prophet. It is for our profession to utter prophetic warnings against the habits, the pursuits and the tendencies which unsettle men's minds, and bring misery upon all their future. It is our duty to point out the dangers of excited, overstrained and ill regulated mental habits. And if there be any exhortation more necessary to give than another, it is that men should lead quiet, sober, healthful and peaceable lives, as the great preventive against the increase of insanity. We must advise against indulging in exaggerated modes of thought and expression, against habitual yielding to the excitements of passing events —in fine, against the *hysterical temperament* which seems to be taking fast hold of the American people, and disabling them from seeing things as they really are—making them enjoy feeding on horrors, sensations and exaggerations of every sort—disdaining human nature's daily food, as not appetizing enough for their diseased mental palates. The public press unfortunately, is the ready provider of what they crave. Unsavory news is gathered from every quarter —crimes are recited in disgusted detail; disasters are tricked out with all the ghastly coloring of the skilled chronicler—unclean gossip is not wanting, often unfit to be spoken, much less printed—graphic descriptions of brutal prize fights find a prominent place— political slanders, lies and personal defamation of character are not carefully excluded. All this printed daily, with a full measure of the grotesque and coarse so-called wit and humor, goes to make up the mental food of the average American, not food for making up clean thinkers and honest workers, but tainted as carrion flesh with foulness and decay a fermenting mass, in great part, fitted to keep up the seething process when introduced, and to leaven with its unwholesomeness, a vast number of receptive minds.

Against such brain food every healthy mind revolts and habitually rejects it. But the damage done to the unstable, the weak and the uncultivated can not be estimated. To them the newspaper is a revelation of life. They study and gloat over its worst details. The dramatically presented crimes have a horrible fascination, which may become potent in drawing by imitation and suggestion, many an unstable mind into their commission. The uncultivated and undisciplined drink in the subtile poison of sensationalism as if it were wholesome food. They "read, mark, learn and inwardly digest" it. The unreal, the false and the exaggerated are the staple of their daily thinking. Their standard of morals is lowered by continual mental contact with what is debased and criminal. Habits of truthfulness, thoughtfulness and earnestness are impaired. Emotional excesses are encouraged and self-control becomes fatally weakened. In fine, the American criminal, and the American "crank" are mental recipients from the daily press of much that is best fitted to aggravate and increase their inborn tendencies to evil. And the American people is daily imbibing what is surely calculated to develop and establish what I have called the "hysterical temperament" among them. Who will reform the sensationalism of the daily press? That man will deserve the everlasting gratitude of his countrymen.

Gentlemen, in this necessarily limited Address it would be impossible to do more than touch upon a limited number of the causes which may excite mental disorders in constitutions already prepared for their developement. I have accomplished the purpose in view in writing this paper, if I have succeeded in calling the attention of my fellow practitioners of medicine to their opportunities, in those families committed to their charge, of averting mental disasters and mental ruin, by the simple method of attention to their education, to their habits and their surroundings.

ORIGINAL ARTICLES.

GALVANO-CAUTERY IN DISEASES OF THE PROSTATE, BLADDER AND URETHRA.[1]

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Hypertrophy of the prostate gland is a disease from which most old men suffer. The gradual ad-

[1] Read in the Surgical Section, at the Thirty-Seventh Annual Meeting of the American Medical Association.

vance of the malady and its unavoidable complications, such as spasms of the bladder, retention by mechanical obstruction, cystitis, dilatation of the ureters, pyonephrosis and uræmia, make life a burden. A large majority of these sufferers succumb prematurely.

No rational treatment has thus far been adopted for the cure of this disease. Volumes have been written on the subject. Various methods have been suggested for the amelioration of the trouble and allaying of actual pain. A few cases have been reported as cured, either by injections, destruction, incision, enucleation, prostatotomy, etc., but no successful method of cure has been determined. Radical cures by surgery have been very few, most patients having died shortly after the operation. The great importance of establishing a method for the *radical* cure of the enlarged prostate no one can gainsay.

For the last five years I have endeavored to apply galvano-cautery directly to the hypertrophied prostate, but was unable to, from lack of a suitable instrument. Mechanics when consulted shook their heads, failed to construct the desired instrument or carry out my plans, and some declared it impossible to make my ideal instrument.

True, many difficulties had to be overcome. A smooth sound was needed of small size, easy of introduction to the spot to be cauterized. Both insulated poles had to be placed in the interior of this instrument, and the mechanism so arranged that the platinum could be heated to the desired degree instantaneously, with certainty and beyond possibility of failure. The cautery, its beginning, duration and ending, as well as the quantity used, must be under the absolute control of the operator. The platinum burner must not, in its entire length, touch anything, the heat must be concentrated, and not approach the surrounding parts of the instrument; the connections must be perfect and act promptly. The instrument must be light, small, handy, have the correct curve, and so arranged that the operator can manage the entire procedure without an assistant. The entire mechanism must be placed within the limited space of a No. 18 French scale sized tube. Next we must have a battery, so constructed as to give a certain quantity of electricity of a fixed potential, suited to the work to be done and the instrument; too high a potential will melt the platinum wires or cut the tissues like a razor; on the other hand, too low a potential will fail to heat the wire or not be effective. Therefore it is imperative to measure the electricity necessary for our work and instrument; for the same quantity of electricity under the same circumstances will always do the same work.

To fulfil these requirements in the construction of the instrument, was a difficulty which was overcome only by six months' constant hard work, trials, vexations, experiments, drawings and models, by myself and Dr. L. Drescher, to whose skill and labor I am largely indebted for the perfection of my idea. I am much pleased to exhibit and demonstrate here the result—*the galvano-cautery sound.*

The instrument is in the shape of a catheter, of smooth, polished metal, with a short curve. At the end of its convexity is a fenestrum, in which is placed a platinum wire to be heated. This wire may be shaped differently, either straight, curved or serpentine, in order to get more or less surface cautery. The other end of the instrument is straight and forms the handle; from this end emerge two wires, the heat conductors, each of which is connected by binding screws to electrode wires, which respectively go to the positive and negative pole of the battery. The current-breaker is attached to one pole at the handle.

Any good galvano-cautery battery may be used with the instrument, but it is necessary, as before stated, to so regulate the battery that it yields the exact electrical potential to be used for the operation. I use a Dawson battery, which works to my entire satisfaction. Experiments are necessary to establish the standard. The heat must be of a high red color, just short of white heat, the instant the current-breaker is touched; this heat must be kept while the wire is in contact with the mucous lining. Less electricity is required to heat a free wire in dry air than to heat a wire held against a moist surface. The strength of the fluid is adjusted according to these requirements; the elements are immersed in the fluid to a certain depth, the electrode wires are regulated with regard to their size, length, etc.

Having determined these requirements for the operation, there will be no further trouble. It is a certainty that, in the near future, every scientific instrument-maker will construct his apparatus with the graduated measure needed, attached and regulated, so that the operator can use any measure desired. We can also use the storage-battery, consisting of a series of cells, which answers our purpose as well as for electrical illumination. This battery, once adjusted with reference to the quantity needed, works with equal power and steadiness till the stored electricity is exhausted. The last of its electricity has the same effect as the first. This instrument, though portable, is rather heavy. We may use the dynamo machine, which can be operated by hand, foot, hydraulic pressure or steam according to construction and desire. Such machine I have seen here in St. Louis at the store of Mr. A. S. Aloe (cor. 4th and Olive streets).

I repeat, no matter what kind of a machine is used, a fixed measure of electricity is necessary. You will see its action in some of the experiments; beginning with one flash of light, to be followed by several quick flashes. You have observed that the flash is simultaneous with the connection, which is important and absolutely necessary. If the wire is heated slowly, becoming warm and gradually hotter, till the desired heat is obtained, it shows that the instrument is faulty in its construction, consequently must be imperfect in its action. In experimenting with the instrument on mucous linings, we find that a galvano-caustic application of the same power acts differently according to the length of time of contact with the tissues. Thus the effects can be regulated from a light blush to the total destruction, or even amputation of the tissues.

It is a mistaken idea of many, that the galvano-cautery necessarily burns, destroys, and is followed

by cicatricial tissue. Nevertheless, this is a favorite objection of some ignorant persons and enemies of electricity. If the operator bungles, or wishes to destroy, he can, but the expert will not. It is well known that eminent neurologists apply galvano-caustic directly to the faces of young ladies, without ever causing marks. All depends on the manner of application. Even deeper applications on mucous linings may cauterize without destroying. Voltolini, Carl Michel, Shurly and Yemans, of Detroit, and many others, have applied the cautery to the nasal and pharyngeal cavities with great success. Therefore it is evident that different methods can be instituted with the instrument, and applied for various purposes to different parts.

We will now consider the application to the "enlarged prostate." Patients suffer more or less from this disease; they may be perambulant or in bed, or divide their time between bed and room; the hypertrophy may be small or extend to the size of an egg, or even an orange. Complications and pain may add beyond endurance to the sufferings. According to the state and circumstances the treatment must be selected, and the method applied. As some cases are beyond cure, the prognosis must be given cautiously, and according to the state of the patient.

The treatment which I prefer, and am now practicing, and alone recommend, and which has done good service, is the *slow* (regular) *method*. This means, give the enlarged gland a short application, from a moment to three seconds' duration; this causes not more than a white film similar to the effect of nitrate of silver, in the treatment of Desormeaux. The *modus operandi* is as follows: The instrument is connected with the electrode wires, which are then attached to the battery. The fluid in the cells must be of the right standard, and all the machinery in perfect order. When all is ready, I invariably let the cells down and try the instrument with a short flash. No matter what assurance I have of the perfection of the appliances, this little experiment excludes any possible failure. The prostatic portion to which the cautery is to be applied must have been ascertained, and the distance from the meatus measured. This distance is then marked on the instrument by a small rubber band. The patient, according to his preference, may stand erect, be on an operating table or in bed. The instrument is then introduced so that the fenestrum with its platinum wire is in contact with the part to be cauterized. The operator will know by touch when the instrument is in the right place, and the measure will corroborate the correctness of the situation. One hand holds the instrument and the other sets the battery in motion, and then touches the little spring to connect the interruptor, a flash follows, the finger disconnects the current. In one moment the operation is done, and the instrument is withdrawn. It causes no pain, and in some instances the patient scarcely believes that anything has been done. He is able to walk about and is not detained from business. In cases of very irritable patients, I have used cocaine injections, but it was scarcely necessary. The séance should be repeated in about three days, or even in two. The instrument must be kept scrupulously clean, as the cautery will fail, if there is dirt between the connections.

The question now arises, how does this method bring about a cure? The end sought is, first to remove the obstruction, so that the bladder can discharge all the urine, and at regular intervals; and then, in order to make the cure radical, to reduce the prostate to its normal size. The theory is that the cautery first acts as a tonic and next as an astringent; the mucous lining shrivels up, the glandular tissue contracts, and by shrinkage the size is diminished. The stimulation gives new life and healthy action. Each repetition of the operation acts similarly, and perhaps on another part of the hypertrophy. The operation must be continued till the cure is effected. Care must be taken not to over-stimulate, and cause prostatorrhœa, prostatitis, etc., thereby creating or aggravating the very ailment we seek to cure. The cautery must be given just severely enough to accomplish the object and no more. If the cauterization is too prolonged, and too deep, the glandular action is overtaxed and weakened and will be followed by a terrible prostatorrhœa, which takes a long time to cure. At the same time an inflammation is created, which causes pain and swelling, and at last, the too greatly cauterized tissue will slough away and may cause septicæmia.

For these reasons, I prefer the slow method described, and am opposed to rapid methods, or too deep cauterizations.

The practical workings I judge by analogy, from observations of the cautery in hypertrophied tonsils. Great similarity of anatomical structure exists between the tonsils and the prostatic gland—both are glandular organs, covered by mucous lining, having epithelium; both are secretory organs, having ducts, follicles, canals, and one twelve to fifteen orifices and the other twelve to twenty small excretory ducts. In hypertrophy of the tonsils, after other remedies had failed, I succeeded by using galvano-cautery with this same instrument. The application was made in cases of children of very tender age, who stood free before me, and without any aid or force opened the mouth, and went through the operation without flinching. Not one complained of pain, all came back to have the cautery repeated, and then stood still with more confidence than at first. In these cases the immediate effect was a splendid illumination of the whole buccal cavity, and a white film was seen on the tonsil after withdrawing the instrument. The cautery could be repeated in two or three days; in one case it was done the next day. Sometimes the cautery was repeated in the same place, at other times, from preference, an adjoining place on the tonsils was selected. Almost daily observations of this series of cases convinced me that the galvano-cautery acted practically just as I have theoretically described. The patients were benefited, the tonsils diminished in size, and a cure effected. It was remarkable how soon the mucous lining regained its normal color, and when a deeper cauterization was used, there was no unpleasant slough, only a patch was observable, like in appearance to follicular ton-

sillitis. The instrument was well adapted for the tonsils, the curve suited exactly, the fenestrum could be held against the exact place to be cauterized, without possibility of burning any other part by accident.

In treatment of the enlarged prostate by galvano-cautery, it is absolutely necessary to pay attention to other symptoms and troubles of the patient, according to established principles. Pain must at all hazards be allayed; this I generally accomplish by rectal suppositories. Chas. Mitchell, of Philadelphia, prepared for me some gelatine articles which act very well. In medication I rely mostly on belladonna. The bowels must be kept regular, since constipation adds considerably to the inflammation, and by pressure causes pain. While the galvano-cautery is used, it is of the greatest importance to attend to the state of the bladder by drawing off the urine and washing the bladder out.

Another possible method, which I call the *rapid*, consists in the destruction of the obstructive part of the prostate in one séance. This is done by holding the cautery on the offending part till the cautery has burned it down and made room for the passage of the urine. The objections to this method are the immediate shock, followed by pain and inflammation, which generally cause a new obstruction, partly by spasm of the bladder and partly by the débris of the destroyed gland. There is even danger of septicæmia. At best the patient is kept in bed, in pain and anxiety, for a long time. Prof. Bottini, of Pavia, practised a similar operation with ultimate success. He constructed his own instrument, and kept up the cautery forty-five seconds. The patient was kept in bed afterwards, and on the twenty-fourth day for the first time passed water voluntarily. It took six months before he was cured. While I admire the zeal of Bottini, I scarcely think his method will become popular.

Another method is the *radical*. It consists of perineal section, and at the same time the total destruction of the hypertrophied part of the prostate by galvano-cautery. This can be done with my instrument, either per urethram, per perineum, or by a larger galvano-cautery burner, or by the galvano-sling. The after-treatment consists in diligently washing out the bladder, using disinfectants, and keeping a catheter in the perineal wound. I would not hesitate to perform this latter operation, if indicated; that is, if the patient had no other chance, if it would be a risk to wait for any other procedure, and particularly if the case is complicated with strictures and consequently too violent spasms of the bladder.

A few days ago a man came under my observation, in whose case this operation would have been the only rational procedure. He had several strictures, admitting no larger sound than a No. 11 French scale, he had a calculus in the bladder, a perineal fistula, and hypertrophy of the prostate; was weak, in pain, and run down constitutionally. With such complications perineal section is the only known rational operation; in fact, no other would fulfil the indications.

Galvano-cautery has advantages over the knife, it avoids hæmorrhage and leaves no raw surface to heal. The cautery protects the amputated surface with a scab, under which the healing process takes place.

Other Uses of the Instrument.—Though my instrument was constructed for the prostate, it has done good service in other diseases, which I will briefly mention.

Spermatorrhœa.—This disease is rare, but one genuine case was treated by applying the cautery to the ejaculatory ducts at 6⅜ inches from the meatus. The applications were repeated once a week.

Impotence.—In several cases the galvano-cautery was applied to different places, such as prostate, Cowper's glands and ejaculatory ducts. The treatment was aided by other means.

In diseases of the bladder the instrument has worked admirably, particularly in villous tumor with hæmaturia, and in traumatic ulcer of the neck of the bladder. The patient had been injured, and a ragged wound near the neck of the bladder was transformed into a chronic ulcer. The place could be felt by the introduction of the instrument, the patient himself could give the best information when any instrument came in contact with the ulcer. One patient, weakened by years of constant hæmaturia, passed no bloody urine after the first application of the cautery.

Urethral granulations, *denuded surfaces*, and *ulcers* readily yield to the galvano-caustic treatment. Frequently patients present themselves to be treated for a chronic discharge, some call it leakage. I consider it error to assert that all chronic discharges of the urethra spring from strictures. On the contrary, I often find that when strictures are radically cured, the old troublesome discharge remains.

For twenty years I have treated such cases by local application through the endoscope. Generally we find chronic granulations, which yield to local, circumscribed applications of nitrate of silver, repeated at intervals. Sometimes we find denuded surfaces, which bleed at touch, sometimes chronic congestions, and even ulcers. With these affections the galvano-caustic has done better and cured quicker than the old method. The endoscope is needed to diagnosticate and locate the diseased spot.

Dr. Louis Sass treats *urethral strictures* by galvano-caustic, with an instrument he himself constructed.

I reiterate, my instrument was designed expressly for treatment of the enlarged prostate. I have used it since October, 1885. During those six months of use it fulfilled its purpose, and was useful in a variety of other diseases as stated. Detailed clinical histories of cases are not now given, for many reasons. Six months' work with a new instrument does not warrant in alleging an established method, or in giving reliable statistics or forming undeniable conclusions.

While the instrument has so far given me satisfactory results, yet more time is needed for observation, in order to give accurate statements and form fixed opinions. The time here allotted for reading a paper excludes a more extended statement. I hope that in the future I shall be able to complete the statistics of my new method.

The sole object of this paper is to introduce and

explain to the profession my new instrument, and to establish my method of treatment of hypertophy of the prostate.

68 W. 35th St., New York, May, 1886.

OPERATIONS ON THE DRUM-HEAD FOR IMPAIRED HEARING; WITH FOURTEEN CASES.[1]

BY SETH S. BISHOP, M.D.,

OF CHICAGO.

ATTENDING SURGEON TO THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY, AND TO THE SOUTH SIDE FREE DISPENSARY.

I will not occupy the time of the Section with a historical account of this operation, although it is replete with interest. Those facts only will be presented which are necessary to an intelligent study of this group of cases. The subjects for operation were not selected with a view to the promising nature of their cases. This method would have been more brilliant but less scientific.

If I have erred at all it has been in the opposite direction. For the purpose of making a crucial test of the efficacy of this procedure, I have made it the last resort in those cases which afforded no hope for relief from any other treatment. Perhaps the propriety of operating on these patients that seemed to promise no results might be questioned, were it not for the facts that in nearly all of them there was an unexpected improvement, and that no unfortunate consequences followed the operation. The cases I have chosen to operate on were far more hopeless than those with chronic suppurative inflammation. The consideration that the former respond so little to our efforts, while the latter are so amenable to treatment with inflations, cleansing, peroxide of hydrogen, boracic acid, bichloride of mercury, etc., with the result of not only arresting the disease, but of improving the hearing, has led me to seriously contemplate the advisability of establishing the suppurative process in proliferous inflammation of the middle ear. In but three cases in my practice has this condition followed the procedure under discussion, and I have operated more than one hundred times. It happened while I was preparing this paper. A temporary purulent discharge occurred immediately after the operations. It had the effect of keeping open the apertures, and no evil consequences followed.

In choosing the location for the incisions I have usually given preference to the section of membrane anterior to the handle of the malleus, in order to avoid the possibility of wounding the carotid artery, should the bony wall of the carotid canal be deficient, or of penetrating the labyrinth through the fenestra ovalis.

Cocaine in a four per cent. solution was employed as a local anæsthetic in very sensitive individuals. It allows sufficient deliberation on the part of the operator, for patients experience no actual pain, although they feel the knife.

Chronic non-suppurative inflammation of the middle ear existed in all of the following cases.

Case 1.—Male, 43 years old, on Board of Trade. Said he had not been able to hear with the right ear for many years. He consulted me relative to a sudden attack of sub-acute inflammation of the left middle ear and Eustachian tube. The right drum-head was thickened, opaque, and retracted. The handle of the malleus was fore-shortened and the processus brevis prominent. There was no hearing for the watch even by bone conduction, but the tuning-fork could be heard by aerial conduction close to the auricle. I advised him to submit to an operation; but as he had no hope of receiving any benefit for his worse ear, and requested me to direct my efforts toward the better ear only, to save what hearing he had, I contented myself at first with the ordinary treatment addressed to both ears. The left ear improved rapidly, while the right remained unaffected. Before discharging him I instilled a warm four per cent. solution of cocaine into his right ear, and at the expiration of twelve minutes made a free opening in the anterior half of the membrana tympani, with Politzer's paracentesis knife. He was not conscious that any cutting was done, and gave no evidence of any unpleasant sensation, except by the remark that "The funnel seemed to press against the ear." The immediate result was that he heard my watch on contact with the auricle, and the tuning-fork five inches distant. He said it was the first time in many years that he had heard a watch with that ear. April 29th he could still hear the watch with that ear.

Case 2.—Deaf mute, German farmer boy, 19 years old, came under treatment in September, 1885, during my service at the Illinois Charitable Eye and Ear Infirmary. There was no sign of any perception of sound either by aerial or bone conduction with either ear. I placed him on a course of treatment addressed to both the middle and internal ears. For the former I employed catheterism at first, and the Politzer method later, as the Eustachian tubes became more pervious. For the purpose of imparting tone to the auditory nerves, I employed central galvanization daily. After four months of persistence in these methods, the only apparent improvement was his ability to hear the tuning-fork as it vibrated in contact with the mastoid process of the right side. I repeatedly tested his hearing in the presence of others, but he was unable to hear loud clapping of hands immediately behind the auricles.

January 28th I opened both drum-heads, leaving elliptic perforations which remained open two or three days. My record book shows the immediate result to have been as follows: Patient hears the loud voice through the conversation tube, but does not understand words. He makes an effort to reply, but the result is only unintelligible gibberish. In speaking to him through the tube, care is taken to prevent him from watching the lips, for he has acquired some proficiency in lip-reading. He repeats the vowel sounds with more or less accuracy, and if given an opportunity to watch the relative positions and movements of the lips, tongue and teeth, he reproduces the sounds with surprising fidelity.

February 1st, the aperture having closed, I opened the right membrane. Patient hears ordinary conversational tone through the tube, repeating words.

[1] Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty-Seventh Annual Meeting of the Am. Med. Association.

February 8th, made long openings in both membranes. I have taken pains to exercise the auditory apparatus by using the vowel sounds and the powers of the consonants separately. He says he hears better with both ears, and seems to appreciate various sounds with greater nicety than before.

February 11th, 17th, and 27th, opened both drum-heads. Patient says he hears my watch on pressure with right ear, and imitates the ticking. He hears the fork close to the right meatus. At the last operation I made two incisions in such a manner as to leave triangular openings. I waited nearly a month before operating again, continuing the inflations and galvanization. The perforation on the left side had then closed, but on the right it remained open.

March 25th, made long aperture in both drum-heads. Hears watch on contact, and fork one inch, with right ear.

March 30th, operated on both drum-heads, making two incisions in each, so as to embrace large triangular portions of the membrane. He is now able to construct and utter sentences of considerable length quite intelligibly.

Encouraged by the improvement in the preceding case, I adopted the same course of treatment in the the following one. It is in striking contrast with the first, and illustrates the impossibility of predicting results.

Case 3.—Farmer, 25 years old. December 11th, 1885, said he had been losing his hearing for "a number of years." There were evidences of disease of the labyrinth, but no syphilitic history could be elicited. Neither the watch nor fork was heard by bone conduction with either ear, but he could hear the fork one inch from the right meatus. There had never been any tinnitus aurium. His treatment was exactly the same as in Case 2. Central galvanization and inflations failing to accomplish anything for him up to January 27, 1886, I opened the right drum-head, with no result.

February 3d, operated on the left one, with no improvement.

February 12th and 17th, and March 4th, operated on both drum-heads. When I discharged him he said there was no perceptible change of any kind in his condition.

Case 4.—Brought for consultation by Dr. Bennett, from Richmond, Illinois, on February 5, 1886. The patient was a young woman 19 years old, and had suffered for "several years." The tympanic membranes were thickened, opaque and retracted. She could not hear the watch, and could hear the fork only when in contact with the mastoid process. Symptoms were present which pointed strongly to labyrinthine disease. No satisfactory results had attended the ordinary treatment. I made free openings in the drum-heads with the immediate result that she heard the fork at a distance of ten inches from either ear. The patient returned home with her physician, who promised to keep a record of her case and report the results to me.

March 23d I received a letter from Dr. Bennett in which he stated, after referring to my operation, that "Since then I have punctured one drum-head twice and the other once. She seemed better after each puncture, but now has reached a stationary period where she does not improve. I am inflating the middle ear with the catheter once a week, and applying the galvanic current. What would you further advise?" etc.

Case 5.—Cooper, 36 years old. Has had great tinnitus in both ears for two years. The drum-heads were opaque, thickened and retracted. Hearing for the watch was on pressure for the right, nil for the left. Fork was heard one-fourth inch from the right ear, and on contact with the left mastoid process. After the operation he could hear the watch two and one-half inches, and the fork ten inches with the right ear, the the watch seven inches with the left. The tinnitus ceased in the right ear and diminished by seventy-five per cent. in the left.

Case 6.—Woman, æt. 42. Has suffered greatly from noises in both ears. Heard watch on contact with the right ear, and on pressure with the left.

February 18th, opened both drum-heads. Watch was heard two inches from the right ear. Hearing remained the same as before in the left, although she thought it was better. The tinnitus, which was increasing before, now intermits, and is less annoying.

February 20th, hears watch two and one-half inches from right ear. Hearing unchanged in left ear. Tinnitus diminished in both.

February 27th, hearing distance for watch on right side, a little more than five inches. No change in left ear. Tinnitus less in both. The improvement in the hearing distance for the right ear was more than 500 per cent.

Case 7.—Woman, 50 years old. Proliferous inflammation of long duration. Hearing for watch on right side, nil, on left side, pressure; for fork on right side, one-half inch.

March 28th, opened both drum-heads; immediate result, nil.

March 29th, both apertures remain open. Hears fork four inches from right ear, and watch on contact with left. The improvement in the right ear was 800 per cent.

Case 8.—A woman about 40 years old came from the country for consultation. She attributed her trouble to the use of quinine. Said she had taken it during a year for intermittent fever, which she had about fifteen years ago. Ever since then her ears have rung constantly. She had typhoid fever nine years ago. The group of symptoms were characteristic of proliferous inflammation. Hearing for watch was on contact for the right ear, one-eighth inch for the left. I opened both membranes, whereupon she heard the watch one-eighth inch from the right, and one-half inch from the left. The tinnitus had diminished.

Case 9.—Iron worker, 45 years old. Hearing of the right ear for watch, nil; for fork, at rim of auricle. Hears watch in left ear on pressure, and fork, one inch. Operated on right ear, with the immediate result that he heard the fork one-half inch distant. Two days later the hearing had improved so much that he heard the fork two inches from the auricle, and the snapping of the nails six inches.

Case 10.—Horseman, 50 years old, whom I had treated several months in the South Side Free Dispensary, by catheterism and Politzer's method, without any perceptible permanent improvement. The drum-heads were greatly thickened, and densely opaque. The manubrium was much foreshortened, and there were cretaceous deposits in both membranes. As in many such cases, there was a chronic naso-pharyngeal catarrh which was quite intractable. There was absolutely no hearing for the fork or watch. The disease had evidently invaded the labyrinth. Although there appeared to be no reason to expect any improvement, since I had never witnessed any ill consequences following the operation, I opened both drum-heads. It was like cutting through leather, so thick and hard and tough were the membranes. The chalky deposit imparted a grating sensation to the fingers that held the knife. He strongly insisted that the operation not only improved his hearing, but relieved the uncomfortable sensations in his head. No later history was obtainable.

Case 11.—Laborer, 51 years old. Had tinnitus of long duration. There was inspissated cerumen in the left meatus when he presented himself at my clinic at the Infirmary in July, 1885. Hearing for the watch then was one-fourth inch for the right ear, and pressure for the left. After eight months of the usual treatment the hearing distance had increased by four times the original distance in the right ear, and from bone to aerial conduction, at one-half inch distance, in the left. But there it remained without further progress until March 29, 1886, when I opened both drum-heads with triangular apertures. Immediately the hearing distance was increased in the proportion, in the right ear, of two to seven, and in the left ear it was doubled.

Case 12.—Man, 27 years old. Had a fall when four years old and alighted on the left parietal eminence. Says he has been deaf in the left ear ever since. Has had noises in both ears for eight years. Inspection revealed proliferous inflammation in both middle ears, and I strongly suspect that there had been a fracture of the temporal bone, extending through the left tympanic cavity. There was no hearing for the watch, and the fork could be heard only when vibrating loudly on either mastoid process. I made large openings in the drum-heads, whereupon he could hear the fork by aerial conduction one and one-half inch from the right ear, and one inch from the left. The tinnitus remained undiminished.

Case 13.—Old soldier, 54 years of age. His affliction dates from the battle of Pittsburgh Landing, where he was precipitated by the explosion of a shell. Thus his disease is over twenty years old. There was no hearing for the fork. The inflammation was of a proliferous type, and the auditory nerves were diseased, beyond a reasonable doubt. There were noises in both ears. As there was no improvement from the usual treatment, I opened both drum-heads, merely to see what the result would be. It seemed to have no effect on the right ear, except to diminish the tinnitus, but he was able to hear the fork close to the tragus on the left side. Four days later the tinnitus had ceased, and the hearing remained the same for the fork. He repeatedly assured me that he could hear better, and said his "head felt clearer and better" for the operation. He said he could hear some with the left ear. I doubt it. I saw the patient several times subsequently, and to my surprise, when I last saw him, he retained the improvement he had made.

Case 14.—Swedish workman, 35 years old. Had tinnitus one and one-half year in the right ear, and two and one-half in the left. No hearing for watch. Fork heard one-half inch from right, and one-eighth inch from left ear.

March 29th.—I made large openings in the membranes, after which he could hear the watch on contact with the right ear, but not with the left. Hearing for the fork was increased just fourfold for both ears. The tinnitus was diminished.

March 30th.—The hearing was five times better in the right ear, and eight times better in the left, than it was just after the operation, and the tinnitus was further decreased.

April 22.—Hears watch one inch with the right ear, and on contact with the left. Tinnitus is diminished by one-half in the right ear, but remains the same in the left. I operated on both ears again, whereupon the hearing was less acute, and the tinnitus was diminished.

April 29th.—Hearing for the watch was one-half inch for the right ear, and contact for the left. There was slight tinnitus in both ears.

The watch employed for testing the hearing can be heard sixty inches by the normal ear, and the tuning-fork is of ordinary size, pitched at *a* above middle *c*.

In recapitulating it will be observed that only two out of these fourteen cases were under 25 years of age. One of these was a deaf mute and the other presented symptoms of labyrinthine disease. All except two of the remaining twelve were 35 or older. Four were 40 or more, and four were 50 or over. The average age was above 38 years. It should not be forgotten that the conditions for which these operations were performed were among those generally regarded as the most hopelessly incurable that ever confronted an aurist. Notwithstanding this, thirteen out of the fourteen cases were more or less benefited, and some were improved by not less than 500 and 800 per cent. How permanent this improvement may prove to be remains for the future to determine, I give the facts as far as they are in my possession.

The history of these cases has been brought down to as recent a date as the nature of circumstances would permit. I have examined and operated on some of them within the last week. I have had as yet no reason to regret the operation, and in some cases of this group, as well as in others which there is not time to report at this meeting, the improvement has been greater than I was prepared to expect. I shall follow up the history of all cases as far as possible and record remote results. My object in operating was to cause cicatrices in retracted drum heads, for the purpose of restoring their normal tension through contraction of the cicatricial tissue. But when the loss of hearing seemed to be due largely

to the interposition of a thick, dense, unyielding drum head between the source of sound waves and the perceptive apparatus, I attempted to maintain a permanent aperture.

In conclusion I must say that the happy results obtained in the majority of cases in which I have operated, and the fact that no ill consequences have followed the operation, have convinced me that the procedure is advisable in the class of cases I have selected. It improves hearing, and sometimes relieves distressing noises and other subjective symptoms when nothing else will.

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MEDICAL PROGRESS.

BADAL'S OPERATION, OR LACERATION OF THE INFRA-TROCHLEAR NERVE FOR THE RELIEF OF GLAUCOMA.—DR. J. S. PROUT, of Brooklyn, in an article on this subject says: The laceration (*arrachement*) of the infra-trochlear nerve (*nerf nasal externe*) has been proposed by Badal, of Bordeaux, for the relief of ciliary pain from various causes, among them any pathological condition that may induce hardness of the eyeball.

In order to find it we need only to lay the index finger, palmar surface forward, on the globe immediately below the brow, the extremity of the nail resting on the side of the nose; the upper half of the free margin of the nail will then cross its course as it emerges from the orbit. It and its accompanying arteriole may often be felt as a very small soft cord about half way between the pulley and the upper margin of the tendon of the orbicularis muscle. A curved incision three-fourths of an inch long, as indicated by the position of the finger nail, will suffice for its exposure. It is small, soft, not readily distinguished from its surroundings and may easily be divided in the search for it, but fortunately it is not necessary to carefully isolate it. After having cut through the integument and the muscular layer the subjacent connective tissue may be separated by two strabismus hooks, one of which is then to be passed under the nerve and its accompanying arteriole from below upward, scraping the periosteum, *on which it lies*, as one takes up the tendon in a strabotomy. The tissue on the hook is lacerated by pulling with a very moderate degree of force directly forward. Half an inch of the nerve may thus be drawn out and afterward cut off. The hæmorrhage from the ruptured arteriole is slight and easily controllable. The wound is to be closed by sutures, and any simple dressing applied that will keep the lids quiet. Except cleanliness "antiseptic precautions" are not necessary. Healing is almost always by immediate union. In forty-eight hours the sutures may be removed. In some cases small tender nodules have remained after healing was complete.

Badal at first used chloroform, as he carefully isolated the nerve, but in his latter operations he used no anæsthetic, as the time required is very short and the pain sharp only when the nerve is ruptured. How the laceration of this nerve reacts on the nutrition and sensation of the eye, Badal does not attempt to explain, but refers to the well-known fact that such operations practised on the peri-orbital nerves do exert a therapeutic action not only against the symptom pain, but also against vaso-motor and secretory disturbances. Besides, it does not matter to the surgeon whether it is by a direct action on the nerve or by a simple reflex action. It is not enough to *cut* the nerve, it must be *stretched and torn, lacerated*, so that the action, if a direct one on the tissue, may be propagated backwards as far as possible in the line of the nasal nerve. In his last paper Badal gives his clinical results based on eighteen patients with glaucomatous disease, on whom he lacerated the infra-trochlear nerve twenty times. They were not selected cases. At first iridectomy, sclerotomy and laceration were done somewhat indifferently, but the last-named operation was done on all his later cases. He calls especial attention to the fact, as one of its decided advantages, that this operation, as it does not attack the globe of the eye, is accepted much more willingly by the patient than iridectomy or sclerotomy. Four consented to an operation only on a formal promise that the eyeball should not be touched.

He says it has never aggravated the condition of the patient, and, without exception, the laceration of the nerve has relieved the pain, often immediately; some patients have suffered until the next day. An operation not involving the eyeball could not be expected to cause a rapid diminution of the tension, and in this particular it is inferior to sclerotomy or iridectomy, but in some cases the tension did diminish quite rapidly, in others slowly, in some no effect was produced. In cases where it has failed no better result has been obtained from iridectomy or sclerotomy done later. On the other hand in a number of cases where these operations had given no results, laceration had succeeded. Abadie has proposed to combine it with one or other of them, but Badal thinks that in severe cases, when a delay of only a few hours may be followed by total loss of vision, a paracentesis of the cornea will relieve the tension, which condition the laceration will then maintain. As far as he can judge it has a value in improving vision at least equal to the other operations.

These are the results of his twenty operations on eighteen patients (nearly all of whom were unpromising for any operation): *Pain* was relieved at once in ten, rapidly in one, gradually in five, not stated in four. *Tension* was relieved quickly in four, gradually in eight, not relieved in six, not stated in two. *Sight* had long been lost in seven, was improved in four, not stated in five.

At the meeting of the Ophthalmological Society of the United Kingdom of April 8, of this year, Mr. Spencer Watson reported that he had trephined the sclera in a case of hæmorrhagic glaucoma. Mr. Brailey said that in such hopeless cases, the best treatment was to stretch the *supra*-trochlear nerve. Mr. McHardy spoke of the ease with which the *supra*-trochlear nerve can be found in the living subject. Mr. E. Browne in two cases had obtained no dimin-

ution of tension from stretching the *supra*-trochlear nerve.

As the *supra*-trochlear nerve is a branch of the *frontal*, and, consequently, much less directly connected with the nervous supply of the eye-ball than the *infra*-trochlear and no more easily found or operated on, it is difficult to see why it should be chosen for *stretching* in preference to the latter.

I have performed laceration of the infra-trochlear nerve nine times on five patients, all so unpromising that the very small chances of success from any operation on the eyeball did not seem worth the risk that would be run. The first four operations were done under ether, the others without anæsthetic, except that in the ninth a solution of muriate of cocaine was injected at the location of the wound. In this case there was no complaint of pain. The third patient complained but little, but the fourth complained of sharp pain when the nerves were torn. In this my experience agrees with Badal's, who says that the operation is so slight and so quickly done that anæsthetics are unnecessary.—*American Journal of Ophthalmology*, July, 1886.

SYPHILITIC CHOREA.—A young man in Buenos Ayres, who by his strange contortions had excited the curiosity of the passers-by, recently came under the care of DR. FRANCESCHI, who was somewhat puzzled by the symptoms. The movements were of a choreic nature, the most characteristic being a contortion of thoracic abdominal and pelvic muscles. The patient's condition became so grave that he could not move out of his room. For a month various methods of treatment were unsuccessfully employed — electricity, sulphur baths, strychnine, hyoscyamine, etc. A consultation was then arranged with Drs. Valdes and Alcorta. The first of these gentlemen remembered having treated the patient six months previously for a chancre, which at the time was not thought to be syphilitic, and had not been treated by mercurials. There were no enlarged inguinal glands or other marks of syphilis; however, it was decided that the chorea might be of syphilitic origin, and therefore Ricord's pills (green iodide of mercury), inuction over the spine of a mercurial and croton ointment, together with Van Swieten's solution (perchloride of mercury) and vinum ferri, were prescribed. In three days salivation occurred, and simultaneously with it the choreic convulsions disappeared. The mercurial treatment was then discontinued, but it was found necessary to resume it, for the convulsions soon began to recur. The salivation subsequently became so distressing that the mercury was again stopped, and the convulsions returned, though not so severely as before. Mercurial and iodide treatment was continued for six months, at the end of which time the patient was completely cured. Dr. Franceschi considers this case especially instructive, as though various predisposing causes are usually named in connection with chorea, neither syphilis nor mercurial treatment is mentioned, as far as he can find, by Bouchut, Graves, Jaccoud, Diday, Tardieu, or Trousseau. It has, on the contrary, been stated that mercurialisation may act as a factor in its etiology; here, however, is a case in which mercury cured it. The author seems to think that perhaps a hereditary syphilitic taint may sometimes have some effect on the development of chorea, and that, if so, mercury would be the best form of treatment to adopt.—*Lancet*, July 31, 1886.

URETHAN AND CHLORAL IN TRAUMATIC TETANUS.—MR. WM. THOMAS JACKMANN gives the following brief notes of a case of tetanus which recovered under the influence of the new hypnotic, urethan, in conjunction with chloral hydrate:

J. C., a lad aged 15 years, came under my care on March 15, 1886. The patient presented well-marked symptoms of tetanus, which were evidently the result of an injured finger on his right hand. This had been crushed by cogged wheels five weeks previously, and had healed up slowly under simple local treatment. The lockjaw was complete, and the episthotonus well marked; severe paroxysms of pain were complained of, which were greatly exaggerated at night. The patient had noticed his neck and jaw muscles gradually becoming stiff for the past few days, but attributed this to a chill. Chloral hydrate in 20-grain doses every three hours was ordered. This relieved the paroxysms of pain slightly during the day, but the lockjaw, episthotonus, and rigidity of the muscles of the legs remained the same, and the pains were just as severe and frequent during the night. Fluid nourishment was administered and the chloral treatment continued until March 25, when, as no abatement of the symptoms were apparent, after consultation with my partner, Mr. T. Simpson, it was decided to discontinue the chloral during the night, and in its place give the patient four grains of urethan every two hours, from 6 P.M. to 6 A.M. The first night of this treatment showed a marked decrease in the severity of the symptoms, and the patient made gradual and uninterrupted progress until April 20, when his recovery was established. The failure of the chloral hydrate to relieve the severe symptoms during the nights, and the well-marked improvement under the influence of the urethan, seem to point to the latter being likely to prove a very valuable drug in the treatment of tetanus, either prescribed alone or as above in conjunction with chloral hydrate.—*Lancet*, June 12, 1886.

EFFECT OF SUBCUTANEOUS FRACTURES ON BODY TEMPERATURE.—E. MÜLLER has recorded the rectal temperature in 36 cases of uncomplicated fractures, and found, in opposition to the observations of Maas, a rise in temperature in 35. The maximum was usually reached on the first or second evening, and was maintained for from one to thirteen days. Neither the age of the patient, the amount of extravasation, nor the extent of the fracture appeared to influence the extent of the rise in temperature. Müller has collected all the records of uncomplicated fracture (English, German, and American) at the time available to him, and finds that out of 359 cases, 308—85 per cent—passed through with marked rise of temperature.—*Centralblatt f. Chirurgie*, June 12, 1886.—*Medical News*, August 14, 1886.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SCARLATINAL NEPHRITIS.

It is a striking coincidence that the two most important contributions on the subject of scarlatinal nephritis that have ever appeared in this country were published within a few days of each other; the one a chapter on the subject in DR. PURDY'S recent work on "Bright's Disease and Allied Affections," the other an article on the subject by DR. I. E. ATKINSON, of Baltimore, in the July number of the *American Journal of the Medical Sciences*. Of the various dangerous complications and sequelæ of scarlet fever none are more important, or more dangerous to immediate or subsequent life and health, than the derangements of the kidneys. A number of careful observers hold that the kidneys are always affected in scarlet fever; that nephritis is as essential a feature of the disease as is the rash of measles. However this may be it is certain that there is an enormous number of cases of nephritis arising from scarlatina, and it is a clinical fact that almost all fatal cases of scarlatina present renal symptoms.

It has been held that while a very large percentage of cases of scarlatina present albuminuria, all these are not truly nephritic. It is not necessary to claim that each case of albuminuria arising in the course of scarlet fever is due to an actual nephritis, but it is certain that a very large number of the cases of so-called pyrexial albuminuria occurring in scarlet fever are nephritic, and accompanied by nephritic lesions. There are cases also in which nephritic lesions are found at the autopsy, though albumin may not have been present during life. To still further show the importance of the subject, we have no means of knowing the particular cases of scarlet fever which are most likely to be accompanied or followed by nephritis. Various symptoms have been pointed out which were supposed to indicate that the kidneys were or would be involved, but with the exception of those mentioned by Mahomed they seem to be valueless: he insisted that the nephritis of scarlet fever is preceded by increased arterial tension, constipation, and the presence of blood-crystalloids in the urine (which may be recognized by means of the guiacum test). There are pathological reasons for supposing that future observation will probably confirm this statement. But it is not our intention to speak exclusively of those cases of scarlatinal nephritis which arise during the course of the primary disease, or which are already distinctly recognizable before the disease has passed off. There are some cases in which the primary disease has occurred years before, and has probably been almost forgotten by the patient or the family; the physician is called to treat a case of dropsy, which is ascribed to a transient disorder occurring but a short time before. Or it may be that the patient is suffering from cardiac hypertrophy with slight albuminuria, or he has albuminuric retinitis, and a careful examination will disclose a history of scarlet fever as many as ten or fifteen years previously. In these cases we must believe that nephritic symptoms occurred during the primary disease, but were unrecognized and have pursued a latent course until they have now passed into the chronic form. It will be seen, then, how necessary it is to continue treatment, and the most careful supervision over the patient, until all evidences of the disease have disappeared. And not only this; but no one should fail to keep a most careful watch over the kidneys in a case of scarlet fever, however mild it may be.

It is of the utmost importance that every case of scarlatina be treated with a view of preventing renal complications; this should be done from the beginning of the disease. The urine must be examined daily in every case, especially during the second, third and fourth weeks; it is not sufficient to examine for albumin, but evidences of renal disease must be watched for with the microscope—for, as has already been said, renal disease may be present though albumin be temporarily absent from the urine. When nephritis is present the urine contains renal epithelium, casts, and generally some blood corpuscles, the casts being cylindrical, hyaline, or epithelial. This examination should include a portion of the whole urine passed during twenty-four hours. It seems scarcely necessary to go into the refinements of chemical and microscopic examinations in these

cases, except to determine if possible the extent to which the kidneys are damaged; for when renal epithelium, casts, blood corpuscles, and possibly albumin are found in the urine of a case of scarlatina we need scarcely hesitate as to the diagnosis. It would be well also to take a sphygmographic tracing of the pulse regularly, if for no other purpose than to determine the correctness of Dr. Mahomed's statement in as many cases as possible. In cases in which the scarlatina has been overlooked on account of its mild character there may be doubts as to the form of the renal lesion present; in these cases much may be done by obtaining a history of recent scarlatina in the family or the vicinity, and by careful examination of the patient for evidences of desquamation or of recent sore throat.

The fact that scarlatinal nephritis is of rare occurrence in the first year of life seems in a measure to give at least one indication for treatment, since it is in this year that the patient's food is almost exclusively milk. Jaccoud said about a year ago that for fifteen years he has not had a case of nephritis among his scarlatinal patients, and he attributes this to his exclusive milk diet. It should be used from the beginning of the attack until the end of the fourth week. The patient should be carefully protected; Mahomed declared that a slight chill during convalescence is sufficient to cause albuminuria. Daily baths or tepid sponging should be practised during the height of the disease, and by this renal complications are frequently avoided. In the mildest cases the patient should be kept in bed for at least a week after the fever has subsided: and he should not be permitted to leave the room before the end of the third week. During convalescence the daily tepid bath or sponging should be practised until desquamation is completed, as a measure of precaution against the spread of the disease. Active purging is unnecessary, but it should be remembered that a condition of constipation may raise the blood pressure and hasten renal inflammation; and Mahomed held that the failure of the bowels to move on a single day was sufficient to cause high arterial pressure and its results. Certain authors recommend the internal administration of chlorate of potash and salicylates in scarlet fever; they should not be used, nor should any drug be given which is known to be a renal irritant. With the first symptoms of renal trouble we should begin the administration of digitalis, as there can be no doubt that it is the most powerful drug that we possess in dealing with scarlatinal nephritis. Other useful diuretics are the citrate, acetate, bicarbonate and bitartrate of potash. Dr. Atkinson especially recommends a lemonade made by adding one drachm of cream of tartar to a pint of boiling water into which a lemon, cut into thin slices, has been dropped. This quantity, properly sweetened, may be taken by a child 5 years old during the day. Pure water is also an efficient diuretic, and may be given freely. It is in the anuria, or threatened anuria, of scarlet fever that the alkaline salts are most useful. The convoluted tubes are now blocked up with colloid matter, and as colloid matter is dissolved when brought in contact with an alkaline solution, the indication is clear. The salts of potash formed with vegetable acids are most desirable in this case. The salts of sodium are less efficient than the potash salts, but in some cases they may be used with advantage, especially when it is desirable to render the urine alkaline for a considerable time. Here the acetate of sodium or the effervescent citro-tartrate of sodium may be used. More pleasant than these, and equally efficacious, it seems, are the granular effervescing citrate of potassium and citro-tartrate of sodium, and citrated kali.

Attention should be paid to the proper action of the skin. The hot pack, wet or dry, is very useful; but care is demanded that sudden chilling do not occur. In cases of threatened uræmia jaborandi or pilocarpin will often prove useful; but one must not forget the effects of these drugs on the heart, and the danger of inducing collapse. Should uræmic coma or convulsions occur they should be treated without reference to the primary disease. It seems necessary to say that the most efficient means of treating uræmic convulsions is by the subcutaneous use of morphine; it is very much more efficient than chloral in uræmic convulsions from any cause. It is not, as many suppose, dangerous to life. The cardiac complications in scarlatina should receive prompt attention. When the area of cardiac dulness begins to extend, the second sound becoming more accentuated, and the apex impulse changing its position digitalis should be administered. Should the symptoms of hypertrophy continue it as well to add convallaria to the digitalis; the fluid extract of the leaf in three to ten drop doses. There is reason to hope that in those grave cases in which hypertrophy has passed into dilatation we have an efficient drug in strophanthus, which is a more powerful and rapid cardiac stimulant than digitalis; but it is unsuitable as a substitute for digitalis in the general treatment of scarlatina. Its action seems to be wholly on the cardiac muscle, it having little or no action on the arterioles. It will aggravate rather than be of service in those cases in which nephritis is very acute, and the urine very bloody.

PASTEUR'S ANTI-RABIC INOCULATIONS.

Notwithstanding the apparent successes of Pasteur's anti-rabic inoculations there still seems to be a great deal of scepticism in the medical profession and among the laity. The medical journals have been diligent in supplying a hungry public, lay and medical, with the details of the performances of the eminent biologist, and the impressions produced certainly seem to be most varied. DR. GRANCHER, Pasteur's Assistant and Inoculator, has recently thought it proper to vindicate in a public lecture the character of M. Pasteur, which has been so much aspersed through the unseemly malignancy of his adversaries; and certainly no one is better qualified for the task than Dr. Grancher, who has been Pasteur's Assistant from the beginning of the inoculations.

After going into the diverse phases of the questions at issue, and the methods followed by Pasteur in his work, dating from the day of his communication, on January 24, 1881, to the Académie des Sciences on the saliva of a child which died from rabies in Lannelongue's wards, to the application on Meister, the first human subject of the experimental method which had succeeded so well on animals, Dr. Grancher also drew attention particularly to the objections made from different quarters to the method. These objections may, in reality, be reduced to two: 1. M. Pasteur treats his rabic patients with a product which is not rabic; this is the opinion expressed by English medical men. 2. The second objection (which is made by a large number of the French Faculté) is that the greater part of those inoculated had been bitten by dogs which were not rabid. The English medical men who composed the Commission appointed to investigate the subject went over to Paris, and, after having witnessed the inoculations at Pasteur's Laboratory, took back with them a rabbit rendered rabic by Pasteur's method. They inoculated another rabbit with its spinal marrow, and afterwards four dogs with the spinal marrow of the rabbit which they had inoculated. The dogs died some time afterwards with symptoms of evident rabies, which seemed to remove all doubts from the minds of the Commission. As to the doubts entertained by the French, Dr. Grancher replies by referring to the statistical report framed by MM. Chantemesse and Charrin, who have been lately appointed to Pasteur's Laboratory, and charged to analyze the cases of 1335 persons inoculated up to June 21st. The following considerations may be deduced from this report: Having in the first instance noticed persons bitten by mad dogs, whether the condition of the dogs was verified at the autopsy or that their spinal marrow had determined rabies in another animal, or whether the symptoms observed permitted no doubt as to the malady, the authors found that of 96 patients belonging to the first category there was one death, or a mortality of 1.04 per 100, or 10 per 1000 in round numbers; and of 644 persons of the second category 3 died from rabies, a mortality of 0.46 per 100, or a 5 per 1000 in round numbers. These results comprise only those persons bitten before April 22; that is to say, when the disease was in full force. These statistics, compared with those of M. Leblanc, on Hydrophobia in the Department of the Seine, give an average mortality of 7.5 per 1000 instead of 160 per 1000. As to the 48 persons bitten before April 22 by mad wolves, they cited 7 deaths among them, or 14 per 100; but statistics established later show a mortality of 82 per 100 from bites of mad wolves. In an article in the "Dictionnaire Encyclopédique des Sciences Médicales," Dr. Brouardel gives a mortality of 67 per 100. Thus it is seen that the difference between the two results is very great.

In following up their investigations MM. Chantemesse and Charrin have established special statistics of results of bites in uncovered parts, such as the face and hands. Of 54 persons bitten in the face and hands before April 22, by dogs known experimentally to have been mad, there was one death, or a mortality of 1.8 per 100, or 18 per 1000. Of 400 persons bitten on the face and hands by dogs known clinically to be mad there were 3 deaths, or a mortality of 0.75 per 100, or 7.5 per 1000. In referring to the documents of the Council of Hygiene from 1862 to 1872, it is found that for bites of the face there was a mortality of 88 per 100, or 880 per 1000; and for those of the hands a mortality of 67.25 per 100, or 672 per 1000. In taking the average of these two groups, that is to say, in placing together the tables of bites on the hands and those on the face the result is 800 per 1000, instead of 18 and 7.5 per 1000.

Dr. Grancher has thought that it would be interesting to compare the efficacy of the three vaccinations in vogue: that of Jenner, that for charbon, and that for hydrophobia. Before the era of Jennerian vaccination, the non-vaccinated (non-inoculated) died from smallpox at the rate of 500 per 1000, those imperfectly vaccinated in the proportion of 260 per 1000, and those effectually vaccinated in the proportion of 23 per 1000. The veterinary surgeons who vaccinate for charbon have furnished the following statistics: Mortality before vaccination 120 per 1000; after vaccination an average of 5 per 1000. The statistics of M. Leblanc compared with those of

Pasteur concerning hydrophobia give the following results: Mortality before anti-rabic vaccination 160 per 100; after vaccination 7 per 1000. The prophylactic influence of these three kinds of vaccination is therefore evident; and, as M. Grancher remarks, the above facts fully reply to the objections made, and still more to the systematic negation of certain persons who build their arguments on a few isolated cases instead of examining the question as a whole.

Dr. Grancher gives some information as to the methods by which Pasteur obtains the attenuation of the rabic virus when it is submitted to dessication by contact with sterilized air. But since his earlier inoculations he has made certain modifications in his method, so as to simplify it as much as possible, and he has succeeded in being able to suppress the inoculation with the spinal marrow for the first three days. The rabbits to be inoculated are now chloroformed while being trephined and inoculated, and these operations are done with aseptic precautions as much as possible. The room is only slightly moistened with carbolic acid; if it were thoroughly washed out with the acid the virus would be destroyed. Now only ten inoculations are made, instead of thirteen as in the case of Meister, the first patient. They are made every two days, so that there is a day's interval after each inoculation. The first inoculation is made with a spinal cord that has been preserved fifteen days, the second with a cord fourteen days old, and so on; the last being made with a cord only six days old. He uses cords only from one to five days old for those cases in which the wounds from the bites are especially dangerous, either on account of the region bitten, the number of the wounds, or on account of the death of injured tissue.

CHEVREUL'S CENTENARY.

On next Tuesday M. CHEVREUL, "Doyen des Etudiants," as he calls himself, will be one hundred years old. He bids fair to be at that time, as he is now, in possession of sound health and unimpaired mental faculties, if we may judge by the fact that he now works nine or ten hours daily with the vigor and enthusiasm of a young man who has yet to win his reputation and fortune. He has a face that more properly belongs to the man of three-score than one hundred years, and a clear firm voice which has but little if anything of senile weakness. And there seems to be nothing to prevent his enjoying the celebration which will be held in his honor in his native place, Angers. There will be a procession, and a dinner and fireworks, a few speeches perhaps, and it is not unlikely that the great scientist will tread a measure with some of the girls whose great-grandfathers were his playmates.

His father was a successful physician in Angers, and noticing the early liking of his son for chemical investigation taught him carefully, sent him to the best school in Angers, and to Paris in 1803, when he was 17 years old. That was just nine years after the killing of Lavoisier on the edict "The Republic has no need for scientists." The young Chevreul was admitted to the laboratory of the, at that time, great Vauquelin, who had risen from the position of an errand-boy in a Rouen apothecary's shop to the Professorship of Chemistry in the Institut National and in the Faculté de Médecine, having been a pupil of Lavoisier. With Vauquelin Chevreul remained for twenty years. His earliest chemical work was the investigation of fossils; and it should be remembered that at that time geology was scarcely a formulated science. About 1805 some fossils were unearthed by engineers working in the valley of the Loire, and the young student went there to study them. The result was a small book the next year giving an account of what he found. Finding in those fossil remains the same elements that compose living bodies of to-day, he was induced to examine the chemical composition of animal bodies, and the next twelve years of his life were devoted to that task, most attention being paid to the animal fats, oils, wax and butter. He endeavored to ascertain by analysis the proportions of the various elementary substances, carbon, nitrogen, and hydrogen, contained in these bodies. The chemist of to-day would not think that a difficult task; but at that day there were but few of the apparatus now found in every laboratory, and modern methods of analysis were unknown. This work gave a new book to science, and added such names as margarine, stearin, oleic acid, and butyric acid. For that book the French Society for the Encouragement of National Industry awarded Chevreul a prize of $600. He was then appointed Professor of Chemistry at the Gobelins Works, and soon after this he filled the chair at the Lycée Charlemagne; and in 1826 he succeeded his great master Vauquelin.

It is a pleasure, even at this distance, to add any tribute of respect to one who rocked the cradle of chemistry; who has since done so much for this cornerstone of medicine. Centenarians are just rare enough to be somewhat as curiosities to unthinking people; but what must be the feeling of respect for one who has continually added to science since 1805; who was living when his countryman Bichat gave

general anatomy to medicine; who had been a laborer in the field of science when Magendie was at work; who was a contemporary of Fourcroy and Vauquelin, of Gall, Rolando, Jacob, Soemering, and Chossat, Chladni and Retzius, Remak and Schwann; of Hamburger, Siebold, Berzelius, Eberle, Valentin, and Claude Bernard, and other physiologists and chemists. It is granted to but few men to see a great science arise, watch it for almost a century, and to be one of its able exponents during that time.

The people in the old country have a very pleasing way of remembering and honoring their silent workers in science; perhaps it will be a custom in this country when our people can spare the time from the ceaseless rush after the dollar.

SOCIETY PROCEEDINGS.

GYNÆCOLOGICAL SOCIETY OF CHICAGO.

Regular Meeting, Friday, June 18, 1886.

THE PRESIDENT, DANIEL T. NELSON, M.D., IN THE CHAIR.

DR. W. W. JAGGARD exhibited

A GRAVID UTERUS WITH ADNEXA, CORRESPONDING TO THE SIXTH MONTH.

The material was placed at his disposal through the courtesy of Dr. H. H. Frothingham, one of the resident obstetricians of Cook County Hospital.

The patient, 30 years old, multipara, came under observation May 17, 1886. While sitting on a chair in the ward, she began to show signs of asphyxia. She was immediately put to bed, but died within five minutes of the beginning of the attack.

Autopsy made forty-eight hours after death.

External appearances.—Some venous hypostasis over dependent portions.

Lungs.—Engorged with blood in lower lobes. Œdematous throughout.

Heart.—Left ventricle partially, but not fully contracted, contained fluid blood, and small clot. Left auricle contained small amount of clotted blood. Right side of heart contained clotted blood in considerable quantity; clots all dark in color.

Valves.—Normal in thickness and competent.

Endocardium.—Deep wine-color; smooth.

Myocardium.—Soft, friable. Few spots of emphysema under visceral layer of the pericardium. Left coronary artery contained a clot at distal side of first branch. Intima of artery stained deep wine-color.

Abdomen.—Peritoneum apparently normal. Gravid uterus with fundus extending to the level of the umbilicus. Large corpus luteum in left ovary. Upon opening the uterus a male fœtus, in the embryonal position, was found. Placenta separated from the uterus by its own weight and without any effort to detach it.

Intestines apparently normal.

Liver enlarged, friable, deeply congested. Spleen slightly enlarged, and very friable. Kidneys congested; acute pyelitis in each pelvis. Bladder normal.

Brain.—Some congestion of envelopes, and at posterior margin of *tentorium cerebelli* two small, round, firm tumors intimately attached to the *dura mater* and pressing upon cerebellum at posterior internal angle of each hemisphere. Tumors are each about the size of a filbert, upon section presenting a grayish firm surface at periphery, and a disintegrated portion at the centre. Cerebellum.—Soft and pale throughout, *arbor vitæ* appearance almost entirely disappeared. No trace of hæmorrhage or embolism discovered. Ventricles of cerebrum contained little fluid. The *intima* of the vertebral and basilar arteries presented the same appearance as that of the coronary.

Dr. Jaggard desired to call attention to the condition of the cervix. The cervix is a funnel-shaped object, the neck of which measures 4 cm. in length; thickness of wall, 2 cm. The upper, expanded portion measures 1.5 cm. in length; thickness of the wall 1.5 cm. The mucous membrane lining this funnel-shaped cervical canal differs in its macroscopic characters from the mucous membrane lining the uterine cavity. The cavity of the cervix is filled with a white, coagulated secretion. The insertion of the membranes forms a circle around the upper expanded portion of the cervix, about 7 cm. in diameter, corresponding to the site of several large veins in the muscular substance of the uterus, and the insertion of the peritoneum externally. At this point, the muscular substance of the uterine wall becomes thinner. The average thickness of the muscular wall of the uterus is 1 cm; that of the cervix 1.5 to 2 cm. Total length of the uterus, 17 cm.

The macroscopical characters of the preparation seemed to sustain the position assumed by Bandl, Küstner and Carl Braun, recently opposed with considerable force by M. Hofmeier. Dr. John Bartlett, a distinguished Fellow of the Society, read a paper entitled *The Cervix Uteri Before, During and After Labor*,[1] July 14, 1873, before the Chicago Medical Society (several years prior to the appearance of Bandl's classical monograph upon the same subject) from which the following extract is made:

"Early in pregnancy the neck of the uterus is called upon to supply its quota to the enlarging body. Speaking somewhat figuratively, as ring after ring of tissue is demanded from the upper part of the cervix, the preparatory development in the remaining portion is such that the length of the neck is not apparently impaired, so that what remains of it as late as two weeks before labor has been mistaken for the entire infra- and supra-vaginal cervix, whilst the loss by the continual transfer from the upper portions of the neck to the uterine walls has entirely escaped notice. That circle of the neck which corresponds at the time of an examination to the limits of its expansion, is regarded by writers as the os internum. The os internum is, of course, as before labor, above the attachment of the vagina, and, near

[1] The Chicago Medical Journal, October, 1873.

term, far removed from the examining finger. The apparent constriction taken for it is simply that point in the cervical walls marking the constantly decreasing line of demarcation between the expanded and yet unexpanded portions of the neck."

DR. A. REEVES JACKSON, in beginning the discussion on Dr. Parkes's paper on the treatment of uterine fibroids by ergot, said: I was very much pleased to hear the reading of Dr. Parkes's paper. I commenced using ergot in the treatment of fibroids in June, 1873. I had used it in eight cases at the time Dr. Byford read his paper based on 103 observations gathered from various persons in this country. I was extremely pleased with the result; two of the patients seemed to be practically cured—that is to say, while there could be distinguished some remaining enlargement of the uterus, the symptoms that were referable to the presence of the tumor were entirely removed, and the patients suffered no inconvenience from the bulk of the uterus. In nearly every case there was improvement. I continued to use it for several years, but have not used it lately—I do not know why. The cases that have been published by those who use it extensively have all shown favorable results except those of Martin, of Berlin, and perhaps two or three others. There seems to be no reason to doubt that ergot, whether given hypodermically, by the mouth, or rectum, does have some controlling influence on the development of uterine myomata, checking the growth or lessening the size of the tumor. Indeed, there is reason to believe that it is one of the very best means of dealing with these tumors. I have used the remedy in perhaps thirty cases. I do not know just what the ratio of success was. In about three-fourths of these cases there was benefit. Sometimes the good effect did not consist in diminution of the size of the neoplasm, but from improvement in the general health of the patient. I was very glad to hear of the almost phenomenal success that followed the practice of Dr. Parkes. In some of the cases he relates the patients were, however, evidently in great jeopardy from the sloughing of the mass, and the difficulty of getting it away before septicæmic symptoms came on. There is great danger, unquestionably, in having a sloughing fibroid retained within the uterus. The treatment by ergot should be accompanied by dilatation of the cervix, so that the mass, when separated from the wall of the uterus, may escape readily. This would lessen that danger. In some cases death has occurred very soon after the stinking discharge appears. Nevertheless, the treatment by ergot is very much less dangerous than any of our surgical methods of dealing with uterine fibroids.

THE PRESIDENT: Have you kept records of any of your cases?

DR. JACKSON: Yes, and I shall be glad, if the interest continues, to report them in detail. I kept accurate notes of the first cases so far as I had charge of the patients. Some of them occurred in the Woman's Hospital, and the patients would go away, and we did not always have means of ascertaining the final results. But of others, occurring in private practice, I can give accurate details.

DR. H. T. BYFORD: I made the assertion that there was no danger of a sloughing of the tumor when it is not situated so that it can be expelled by way of the vagina. This was based on the fact that, unless submucous, it cannot be firmly enough compressed. I have reported a case of fibroid tumor of the vagina,[1] whose thick pedicle was gradually cut through by daily tightening a fine wire about it; when the wire had cut through the pedicle, it was found to have reattached itself, and retained its vitality, showing that tumors of this nature require very little nourishment to keep them from undergoing sloughing. The cases on record are very few in which subperitoneal growths have sloughed from the use of ergot.

DR. W. W. JAGGARD said, with reference to priority in the use of ergot in the treatment of uterine fibroids, that Hildebrandt, of Königsberg, had published a paper in 1872, in which he recommended the drug. The growth of the neoplasm was limited by diminished access of blood, and, in some cases, it was actually expelled from the uterine cavity. Hildebrandt's recommendation was the revival of an old practice. Dr. Wm. H. Byford's paper—Address on Obstetrics—was read in Philadelphia in 1875. During the interval of three years, several papers were written extolling the action of ergot in the treatment of uterine fibroids, both in the diminution of the quantity of blood flowing to the tumor, and also in actively causing its expulsion from the uterus.

DR. HENRY T. BYFORD said: Dr. Jaggard fails to take into consideration the different ways in which ergot acts. It acts first, in a radical way by expelling the tumor, as in the submucous variety; second, in a gradual way by causing atrophy and absorption, as in the interstitial variety; third, in a partial way, by arresting the tumor's growth and activity, as in the subserous ones; fourth, in a palliative way by relieving the symptoms, as in cases of large tumors, near the menopause. Schroeder, in the last edition of his *Krankheiten Weiblichen der Geschlechtsorgane*, gives Dr. Wm. H. Byford credit for suggesting the use of ergot for the expulsion of the tumor. There is no longer any reason to doubt that ergot is the surest and safest cure for all but the very exceptional cases of uterine fibro-myomata. A tolerance of moderate doses is quickly established both by the organs through which it is absorbed and by the general system. Sloughing is almost never produced except in the submucous variety, when it need not be dangerous. For several years past, with one or two exceptions, I have not given ergot in any other way than by the rectum. I use 5 to 8 grains of Squibb's extract of ergot twice a day and continue it for two or three years, with favorable results. I remember one case in which the tumor extended almost to the umbilicus when I first saw her, five years ago. It was an irregular, nodulated tumor, mostly subperitoneal, with projections larger than the fist, filling up the pelvis, and to a great extent the false pelvis also, and sometimes caused excruciating pain by its pressure. The patient had repeatedly bled through six and eight weeks, and must have lost 100 pounds. Tampons were required to save her life. I never saw paler mucous membranes in a living

[1] Chicago Medical Journal and Examiner, August, 1885.

being. It was a very much worse case than many which I continually find cited in medical literature, in which hysterectomy is considered necessary. The patient begged to have the tumor removed. She could not take the ergot for any length of time either by rectum or mouth; but after a while she tolerated 5-grain rectal suppositories, and has passed the menopause. The tumor, having lost its activity, has become considerably smaller; while she, having regained her hundred pounds, has become considerably larger. I have a case which had been treated for a year with all of the most approved remedies, except ergot. When I first saw the patient, two years ago, she weighed eighty-three pounds; she had a nervous chill and almost fainted when I first entered the room, because I was a stranger. She had not slept for weeks except under the influence of narcotics, and had symptoms of acute tuberculosis. She was in the habit of bleeding steadily from three to six weeks, and was being so rapidly destroyed by the loss of blood that I at first had to use the tampon. She was put upon 8 grains of Squibb's fluid extract of ergot per rectum and tincture of iron by the mouth. Her health improved rapidly and the hæmorrhages progressively diminished. Her lungs were recently examined by Dr. H. A. Johnson, who found the remains of old trouble, but no tendency to unfavorable changes. Her cough, which had lasted so long, has entirely left her. She now takes the ergot a part of the time only. Her menses last four days, are natural in quantity and quality, and are followed every two or three months by a watery discharge of a faint pinkish tinge. She cannot feel the tumor now, although a projection the size of a child's head was formerly felt by her between the umbilicus and left groin. It might be said of this case that it was also a very proper one for operation, and one in which ergot, if harmful to the system, would have done injury. I have similarly relieved other cases nearly as bad, and cannot help believing that, when treated early, judiciously and persistently by ergot, fibroid tumors of the uterus will show a mortality of 1 or 2 per centum instead of 10 per centum as at present; that hysterectomy for fibroids, with its mortality of 20 to 40 per centum, will eventually become an interesting relic, and the removal of the appendages a precious rarity.

Dr. E. W. Sawyer said: There is one point that was not alluded to by the reader of the essay, and that has not been spoken of in the discussion. The fact that the point has been proved in practice shows that it is worthy of attention. That ergot will cause atrophy of a uterine fibroid, causing a detachment by ulceration and expulsion, is a well-established fact. When the fibroid is submucous, or nearer to the mucosa of the uterus than to its peritoneal surface, I have no doubt that that process can be continued and completed with safety. But let us suppose a tumor very close to the peritoneal surface; this process of atrophy takes place, the peritoneum ulcerates through, and the life of the woman is jeopardized. Such a condition occurred in a patient seen by the President of this Society, and it was shown that had the patient lived long enough the fibroid might have been thrown off through the abdominal parietes. This patient died of peritonitis. The large and partially detached fibroid was in a sac containing a great quantity of pus. This sac had ruptured, occasioning the peritonitis.

Dr. F. E. Waxham said: I would simply add my testimony as to the value of ergot in the treatment of submucous fibroids, by citing a case: A woman 45 years old came to me some time ago complaining of copious hæmorrhages at her menstrual periods, and upon careful examination an enlarged uterus was found, which nearly reached the umbilicus. The diagnosis of fibroid of the uterus was made. This woman was placed upon ergot, combined with opium, to control the pain, which she took for several weeks. Between the second and third months after commencing to take the ergot, I was called to her in great haste and found her apparently in labor, the uterine contractions quite regular and very severe; a partially dilated os and the tumor presenting. This tumor was expelled after two or three hours. It was nearly as large as a child's head at time of birth. The patient made a complete recovery.

The President: In what state was the tumor?

Dr. Waxham: I can hardly say it was softened, but it was fleshy in character, and some pus upon it as though it had suppurated. It was somewhat offensive, I remember. I attended her for some weeks subsequently; there was some febrile reaction, but no serious trouble followed.

The President said: I have reported a case in which a tumor was thrown off without sepsis. I have had since quite a series of cases in which tumors have been thrown off; some have been absorbed and there has been a various history, which I hope to make the subject of a special paper, and would like the assistance of others in making up a history of these cases. I think we are specially favored in having with us Dr. Wm. H. Byford, who has had such extended extended experience in these cases.

Dr. Wm. H. Byford, in closing the discussion, said: Mr. President, you are right in supposing that I feel great interest in this subject. I have made it a study for a long time. Perhaps as good a way as any to introduce my views on this subject to the Society, will be to go back to the commencement of my own researches in this matter. In 1872, as Dr. Jaggard has said, Hildebrandt commenced a series of experiments for checking the hæmorrhages connected with fibroid tumors of the uterus, by giving hypodermic injections of the extract of ergot, and succeeded in a great many instances in suppressing the hæmorrhage and relieving the patient from the inconvenient symptoms. During these experiments he also ascertained that the tumor would sometimes disappear. I think his statistics were not large, and that he only reported a very few, perhaps three or four, cases in which the tumors disappeared by atrophy during the time he treated them in this way. In 1874 I was elected to the chairmanship of the Section of Obstetrics in the American Medical Association, and as these experiments of Hildebrandt had attracted considerable attention, I thought it would be a good time to make some investigations as to the

value of his facts. I commenced correspondence over a large portion of the United States and Europe, but especially communicated with my friends in this part of the country, among whom were my immediate associates in this city, who had been engaged in using hypodermic injections of ergotine according to the method of Hildebrandt, once in two or three days. All of them bore testimony as to the efficacy of that kind of treatment, and as to the fact that these tumors could be made to disappear in a great many instances by atrophy, and in a great many more the symptoms could be relieved so that the patient was rendered comfortable, the presence of the tumor giving them but little inconvenience. Some of the gentlemen with whom I had correspondence had been using the ergot in different ways, giving it by mouth, giving it per rectum, and injecting it into the tumor itself, and by various other methods. I noticed one fact in my own practice and that of my friends, which was that the more frequently the ergot was given the more powerful its action was. In giving it two or three times a week hypodermically by the Hildebrandt method, there is very little distress produced by it; but the tumor may gradually disappear and the symptoms get better. I collected 103 cases from different parts of the country, and in all of them the attention of the practitioner was directed to the point of causing the disappearance of the tumor by atrophy. During the time I was making these investigations cases of fibroid tumors occurred in the practice of my friends, who consulted me. One was a remarkable instance in the practice of Dr. Merriam. I remember the particulars. The patient was a little Irish woman who had a tumor almost large enough to reach to the umbilicus. He commenced the use of ergot in September, 1874, twenty drops of Squibb's fluid extract three times a day. It produced so much contraction of the uterus and so much pain as to alarm the patient and the doctor himself; he thought these pains ought to be suppressed, and as a consequence he would intermit the use of ergot, give anodynes to stop the pain and get relief from the sufferings of the patient, but would recur to ergot as soon as his fears had subsided. In January, 1875, he directed her to recommence the ergot and increase the amount. He gave her, I remember very well, twenty-five drops of Squibb's fluid extract three times a day. In March, which was about two months from the time he began giving her ergot in that way, the patient commenced having expulsive pains very much like labor, and not long after that, probably about March 20th, there commenced to issue from the vagina a putrid liquid that was very offensive and which contained small pieces of organized substance. He became alarmed and entirely withdrew the ergot, supposing he was doing mischief, but the death of the tumor had been produced and as a consequence the uterus continued its action to throw off this foreign body, until April 5, 1875, he was summoned in great haste to see his patient. I was also summoned. Upon arriving at the house, which he did before me, he found the tumor expelled, part of it laid in the vagina and part between the limbs of the patient, a protruding mass almost the size of a child's head. It was not expelled in a lump, but was broken in pieces that would represent that size. The patient at that time had septic fever, with increased temperature and increased frequency of pulse, etc. The doctor and I both felt uneasy about her, but she very soon rallied and in a short time was well, and since has given birth to a child.

That was my first observation as to expulsion of tumors of that kind. It started a train of thought in my mind and led me to think about increasing the ergot beyond the amount that had usually been given for producing atrophy. In the same year, July, 1875, I commenced giving it with the view of expelling a tumor. I gave my patient at first fifteen drop doses of Squibb's fluid extract three times a day, and increased it until the patient was taking a teaspoonful of ergot three times a day. On August 15th, about five weeks after I commenced using it, the tumor was broken up and expelled from the vagina. It was expelled by pieces, the first piece about as large as my thumb, of a grayish kind of substance that smelled very badly. The action continued; I was somewhat alarmed and gave the patient anodynes, but the uterus had already commenced to act on the tumor and expelled it, as it would any foreign body. In December of the same year I had an opportunity of repeating the experiment, and the case terminated in the course of six weeks, by the same method of administering the ergot. In 1876, on returning from the world's exposition at Philadelphia, I was requested to call at Coldwater, Mich., to see two patients, one with cancer and one with a tumor. I found one of these patients with a tumor as large as my head, the measurement of the cavity being fully six inches. I told her I believed the tumor could be expelled if she was willing to go through the process. I felt uneasy, however, to leave her to use such medicine by herself, and tried to teach her how she should proceed when the expulsion should take place. She took the ergot three months without much effect, except that occasionally she would have a paroxysm of pain; after that, however, the pains became so very severe that she could not take the ergot much of the time. But, brave and intelligent as she was, she repeatedly resumed it, and finally the tumor commenced to come away. It came away in about five weeks from the time the first symptoms of expulsion occurred. She wrote me a description of the method of expulsion. She said at first small lumps made their appearance and passed out of the vagina; after the second day they became larger, and on the third and fourth days they seemed large enough to fill up the vagina. With her scissors she cut off pieces of it and pulled at it to assist its removal. She labored at it two or three days until it was all expelled. In about three weeks thereafter she came to see me, and the uterus had shrunk back to near its natural size. She has since had the menopause, and is now in good health. She sent me at that time a quart cup full of this expelled fibrous substance.

Another case occurred in the western part of this State, under the care of Dr. Crandall, of Sterling.

The patient came, by his directions, to see me, and I found a tumor of considerable dimensions and advised her to take ergot. She went home and in about fifteen or twenty days got her work done up, as she expressed it, took three doses of thirty drops of Squibb's fluid extract of ergot, and started up such a process of expulsion that, notwithstanding the efforts of her physician to stop it, the pains went on to the expulsion of the tumor, which was completed in about three weeks.

Dr. Wm. Fox, of Milwaukee, three years ago sent me a report of another similar case. In summing up these observations, I have known personally of twenty-six cases of expulsion of the tumor in this way. With reference to the dangers connected with the expulsion, I would say that only one out of these twenty-six cases proved fatal. They all had septicæmia to some extent, but as soon as the mass of dead tumor was removed the patient commenced to recover and got well. Some of the patients had no assistance. This one patient in whom it proved fatal lived in Monmouth. It occurred about six years ago. She was a lady who, like other foolish women, distrusted her home physicians, and she came here, supposing she would find better treatment. I advised her to take ergot, and in about three months the pains commenced that caused the tumor to be expelled. She came here with the lower part of the tumor hanging from the vagina and uterus while the upper portion was clinging to the cavity in which the whole of it had been lodged. She was then laboring under a high fever. The smell was terrible. She came to the Tremont House and it was several hours before I could see her. When I arrived it was a very simple matter to enucleate it, and I removed it in a few minutes. But she had already received a fatal poisoning from the retention of the dead tumor. This is the only case I have known to prove fatal. I do not get a history from other gentlemen of any more unfavorable results. They all tell me they are frightened at the symptoms, and they are afraid the patients are going to die, but they do not die. When the mass is taken away and the vagina washed out the symptoms disappear. Since thinking of this matter and observing the effects of this remedy I have thought I could come to definite conclusions as to the conditions under which we might predict the expulsive effects of ergot by the appearance of the tumor. You know that it is not a very common thing to find a case in which there is a single tumor in the fibrous tissue of the uterus. More frequently these tumors are complex. Quite a number of nuclei of formation; we often see in one uterus four or five, sometimes fifty different points of solidification. Now a single, or even a double tumor, located within the circle of the fibrous arch of the uterus near the mucous membrane, is the kind that I think may almost certainly be expelled. If you find a case of symmetrical development, where the uterus seems near its normal shape, no matter how big, so it is normal in shape, oval, or globular, without any large projections standing out in various directions, feeling somewhat elastic to the touch, and attended with hæmorrhage, you may be pretty sure you can expel the tumor by commencing with small doses of ergot and increasing them in size, and then when the pains begin, not to stop them. The presence of severe pains frightens a great many men from finishing what they have begun. If I were to try to explain this operation I would say when ergot is given in this way, after a while the tumor becomes starved, the supply is cut off so there is not blood enough to support it, and very soon it dies in consequence of this strangling process. When it dies there is, at the same time, gangrene of the mucous membrane covering it; then it becomes a foreign body and you cannot keep the uterus from expelling it. The expulsion is a consequence of this starvation and killing process in the tumor. As to the action of ergot in tumors that are not submucous, of course I know that tumors not submucous cannot be expelled. There is what is called the interstitial tumor, developed in the central stratum of the fibrous walls of the uterus; these are the proper subjects of the Hildebrandt process for atrophization. Then with reference to the effect of ergot upon subperitoneal tumors: I have often been asked the question, Can ergot affect these subperitoneal tumors? I think they are frequently starved out and cured; when not too near the peritoneum there is no danger of their becoming detached and putrid in the peritoneal cavity, because the action is from the tumor. In the submucous tumor the contractions are all towards it and none from it. There is one circumstance to be taken in connection with these tumors and the action of ergot upon them, that has not been sufficiently considered. A large proportion of them growing to any considerable size contract attachments to the peritoneal membrane, the intestines, omentum, or the walls of the abdomen, and in making this attachment they get a new supply of blood, which makes the life of the tumor more tenacious than it would be otherwise. This very process of adhesion to the walls of the abdomen is, more than any other, the cause of their great size and the change from a fibrous to a fibro-cystic tumor. We need not expect such tumors to be affected by ergot. There are a good many other things that interfere with the successful use of ergot, of which I cannot now speak. I am grateful to my western associates who have assisted me by facts and experiments on this subject. If you go to the eastern part of the United States they will tell you that ergot is of no use in the treatment of fibrous tumors, or it is too dangerous; the patient cannot live under the pains of expulsion, etc.; but if these same gentlemen had a patient in labor they would urge the pains instead of stopping them. Most physicians who do not believe in the efficacy of ergot use Hildebrandt's method pretty much altogether, which produces tonic contraction of the fibres of the uterus, but does not go to the extent of causing expulsive pains. Then, again, there is too great apprehension on the part of the profession generally of the dangerous poison of ergot. I do not know whether the history we have of the poisonous influence of ergot in producing nervous diseases, gangrene, and so on, is true; whether the observations that led to that teaching were correct at one time or not, but

I know that after the use of ergot persistently for two or three years in the same case, I have never seen any evil influence produced by it, unless it is in cases where the violent action of the uterus would be regarded as such. I have purposely avoided saying anything about the *modus operandi* of ergot in causing contractions in the uterine fibres, because that is now sufficiently understood by the profession. But, Mr. President, I feel that I have occupied too much of the valuable time of the Society already, and will say no more.

DR. WM. H. BYFORD presented

A STUDY OF THE CAUSE AND TREATMENT OF PELVIC HÆMATOCELES.

The author cited the case of a non-suppurating, retro-uterine hæmatocele of six months' standing, which he evacuated *per vaginam* March 18, 1886, and then treated with antiseptic irrigations. She was up and about the house in eleven days. As the odor and discharge were still causing discomfort, the doctor, influenced by the advice of Apostoli and Doléris, curetted the cavity. He found no more blood or débris, but started up a mild attack of local peritonitis, which delayed instead of hastening the cure. The patient left the hospital in a little less than a month after the cessation of all discharge. A small lump of induration extending from the abscess opening to the right sacro-uterine ligament was all that was left of the tumor.

The following résumé of interesting points in the case is given:

1. The length of time from the occurrence of the hæmatocele to the time of operation, about six months.
2. The method of opening the cavity, viz.: by first tearing the vaginal wall, and afterwards the sac wall.
3. The absence of fluid in the tumor.
4. The breaking up of the mass with the finger without an attempt at thorough curetting or removal of the entire contents.
5. The complete disintegration and discharge of all bloody substance in thirteen days.
6. The absence of high temperature—102° F. having never been reached.
7. The small amount of anodyne required—one dose (except the two doses to relieve the irritation from subsequent unnecessary curetting).
8. The toleration of strong antiseptic solutions. It was necessary to weaken them on account of their effect upon the vagina.
9. The absence of the usual amount of odor in such decomposing masses.
10. The large quantity of food taken throughout.
11. The absence of any kind of sickness from the beginning until the cavity was curetted.
12. The curetting of the cavity on the thirteenth day delayed her recovery, producing the only serious symptoms that were noticed.
13. Notwithstanding a setback of ten days caused by the curetting, she was well enough to go home inside of a month and dispense with treatment.
14. The attack came on after a miscarriage.

P. F. Mundé reports two new cases of hæmatoma successfully operated upon three and six weeks, respectively, after their occurrence, both large, and resulting from or after abortions. (*N. Y. Medicinische Presse*, Vol. 1, No. 1, Dec., 1885.)

Five other cases are briefly related, four extra-peritoneal hæmatomas and one large retro-uterine hæmatocele, which had come under the writer's observation during the past two years, and which were successfully treated on the expectant plan. He was unable to find justification in any text-book for having operated in the absence of any threatening symptoms until he procured the last edition of Billroth & Lücke's "Frauenkrankheiten" and Schroeder's text-book (both of 1886). He cautions against taking the advice of Bandl, to operate after the first subsequent menstrual period, or that of Apostoli and Doléris, to operate immediately by the galvano-puncture wherever and whenever found. Operations at such times are connected with what are designated as immediate dangers, viz.: "a recurrence of shock, hæmorrhage, or (if hæmostatic tampons be used) of inflammation; or of septicæmia followed by inflammation, if antiseptic injections of sufficient strength be used."

The dangers of the expectant treatment are mostly remote, and are such as "suppuration, septicæmia, perforation, and prolonged pressure upon, and displacement of, surrounding organs, with their results, viz.: the aggravation and perpetuation of pre-existing pelvic disease, or the originating of new ones."

While recognizing the necessity for evacuation within the first three or four weeks in certain exceptional cases, he would, as a rule, delay operating long enough to avoid the immediate dangers, yet not long enough to incur the remote dangers of delay. The patient must invariably be kept in bed and the tumor should be left alone until the primary acute symptoms subside. If the tumor remain hard and diminish in size no matter how slowly, it should be let alone as long as the symptoms do not become worse. If the tumor remain stationary and boggy to the feel, and the symptoms begin, after a few weeks, to increase in severity, it must be operated upon; or if the symptoms remain without improvement, while the tumor shows no signs of being absorbed, it is better not to wait for serious symptoms, but operate in the subacute stage, or when the symptoms have subsided as much as they will. There is a certain class of cases, like the first one reported, in which the acute symptoms subside, the patient recovers considerable strength, but the tumor remains elastic, or boggy, and almost stationary, and interferes with her usefulness. If the patient cannot, from adverse circumstances, or does not wish to make an invalid of herself for the many months of quiet and carefulness requisite for safe absorption of the organized clot, she should have the benefit of an operation at a time when it is almost devoid of danger.

Dr. Byford would not select the method of operating recommended by Apostoli and Doléris because two sittings would be required for a complete operation, and because the use of the curette through so small an opening as would be justifiable by galvano-puncture is not devoid of danger. He prefers punc-

turing and tearing with a dilator, first the vaginal and then the cyst wall, to Zweifel's method of incising, on account of the less liability to trouble from hæmorrhage. He also advises the attack of such retro-uterine hæmatoceles as are accompanied by obliteration of the Douglas cul-de-sac by puncture and dilatation per rectum, when possible. The difficulty would be but little greater than the dilatation of the fistulous opening of a pelvic abscess.

Thorough curetting is condemned as dangerous, but a breaking up of all solid material by the finger, and the trusting to copious, strong antiseptic irrigations (which can be endured much stronger if the abscess walls are not scraped), is recommended. Hydrarg bin-iodide $\frac{1}{3000}$, or bi-chloride $\frac{1}{2000}$, or acid carbol. 1½ to 2 per cent. twice or three times a day, as necessary. Instead of a drainage-tube being used, the finger may be passed through the opening daily in order to dilate and insure free discharge. On account of diagnostic difficulties an aspirating needle should precede the use of the knife.

The discussion of Dr. Byford's paper was deferred until the next regular meeting.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, April 28, 1886.

THE PRESIDENT, C. H. A. KLEINSCHMIDT, M.D., IN THE CHAIR.

DR. JOHN B. HAMILTON showed some

GRANULES OF BONE REMOVED FROM A TUMOR.

The history of the case is as follows:

The patient, a girl of 19, had had caries of the spine in her youth and was at present a hump-back in consequence. About two years ago an abscess formed anterior to the left trochanter in the left thigh. This had been aspirated and about one quart of pus drawn away. About one month ago a "hump" appeared just back of the left trochanter. When the doctor first saw her he supposed that it was the reforming of the abscess. The tumor, however, was hard, and on palpation there was crepitation such as one gets in emphysema of tissues. He cut down on the tumor and removed the exhibit, which was contained in the fibres of the tensor vaginæ femoris muscle. One would suppose that such a hard mass would have produced suppuration, but in this case there was no pus or inflammation, and the pain which had been present since the first appearance of the tumor must have been due to pressure on the sciatic nerve. His theory of the presence of the deposit was that during the process of caries going on in spine in her youth, particles of exfoliated bone had gravitated with the pus which had formed the abscess and had remained on its removal.

DR. BERMANN exhibited a portion of

A LARGE NASAL POLYPUS

which he had removed. When the patient presented himself to him the polypus, which had been growing eight years, was visible protruding from the left nostril and also in the posterior nares, completely occluding that side of the nose. He had been obliged to remove it with the cautery, in sections. The exhibit was about half of the polypus, the remainder not yet having been removed. He had found that the inferior turbinated bone on that side had been eroded, and that there was a large cavity there.

DR. LYON showed the photographs and detailed the history of a case of

CANCER OF THE LEFT MAMMA,

occurring in a patient in the Government Hospital for the Insane. In 1865 the woman became afflicted with a suicidal melancholia, probably brought on by puerperal convulsions. She was at that time extremely violent, but has gradually become less so, especially since 1883. In that year a tumor was discovered just above the left breast but apparently not involving the gland. In June, 1884, this tumor, which was as large as a small egg, was removed, and a microscopic examinatiou proved it to be an alveolar sarcoma.

The wound healed well. Two months later three distinct tumors had each reached about the same size as the first one. One of these was in the left axilla and the two others were near the ends of the cicatrix of the first one. These were removed, and Drs. Blackburn, pathologist to the hospital, and Formad, of Philadelphia, pronounced them soft carcinoma. A third and fourth operation were done during the next six months. Each time the growth was larger, more rapid, and involved more tissue, and each time the incisions healed almost by first intention.

The tumor reappearing a fifth time, Dr. J. Ford Thompson was called in consultation and advised that no further operations be done. In the ten months which have passed since the last removal the tumor, as shown in the photographs, has become eleven inches long, seven inches wide, and projects a mass of suppurating and floridly granulating tissues two inches high and weighing probably several pounds. It extends from the shoulder downwards throughout the entire breast, with a continuation to the left as far as the floating ribs in the axillary line. There is wasting, and though there is no external evidence of involvement of any internal organ, it is probable that such is the case.

What he wanted especially to call attention to was the effect the cancer had as a counter-irritant on the partial dementia of the patient. He said that the element of pain is, in some insane persons, much less prominent than in sane persons. This we see in some instances of self inflicted injuries which seem to have a quieting effect. In this case pain has never been much complained of, though it is possible that it never has been present in any great degree. Here the only other treatment besides supportive has been 15 drops each of tinct. opii and belladonna three times a day. This has been sufficient to keep her in a quiet and perfectly manageable frame of mind. When omitted, however, there is some little complaint of pain. The terrible odor emitted from cancer has been treated, with more or less success, with hydro-naphthol. The cancer is now rapidly breaking down.

DR. H. D. FRY presented the

BRAIN FROM A CASE OF TUBERCULAR MENINGITIS.

The history of the case is as follows: Dr. Fry saw the case first on April 18, 1886. The patient was a white female child 17 months old. There was a good family and personal history, except that child was a little late in dentition. For three or four weeks previous to his first visit his patient had been restless and fretful, there had been a desire to rest its head against its mother's shoulder and right-sided hemicrania, as shown by the child constantly carrying its hand to that side of the head. There had been only occasional vomiting and no constipation—rather the contrary. When first seen the pulse was 100, temp. only slightly elevated. The mind was dull, the pupils dilated, and there was complete left hemiplegia. The child gradually became less susceptible to external impressions, and on April 21 it could not be aroused. The temperature had several times reached 103°. At this time the pulse was 160, the pupils widely dilated, though reacting to light, and there was alternating internal squint. The right eye was staring with the lids wide open while those of the left eye were bolted. There was difficulty in swallowing. The muscles of the right upper extremity and shoulder were affected with clonic spasm and the fingers of the right hand were flexed on palm. Aggravated attacks of spasmodic contractions of the muscles were accompanied by hurried and panting respiration. Occasionally the contractions involved the left upper extremity, but at such times were of short duration. The child lived two days longer, the convulsions meantime ceasing and the coma deepening.

Dr. Fry said that complete hemiplegia is uncommon in tubercular meningitis. The authorities (Meigs and Pepper and Flint) mention incomplete paralysis as of occasional occurrence, while J. S. Smith and Henoch make no mention of this condition. The latter author, however, gives this as a symptom of "tuberculosis of the brain." The diarrhœa present in this case he thought was due to tuberculosis of the intestinal tract.

The brain was examined by Dr. Lamb, of the Army Medical Museum, and presented but little of a pathological appearance. There was some dilatation of the ventricles, most marked on right side. Pia mater much congested, and in vicinity of right middle cerebral artery showed many minute opaque spots, which have disappeared since placing the specimen in alcohol. None found elsewhere. To the naked eye there appeared to be tubercles. Fluid in ventricles and general cavity increased in quantity and was turbid; substance of brain congested.

DR. TAYLOR said that he had had a case of a child 20 months old who had had symptoms very much as the above. There was bolting of eyes and fixed stare. The child could swallow when liquid food was put in its mouth. His patient had remained comatose for seven or eight days and then slowly began to recover and was now convalescent. He had diagnosticated tubercular meningitis, but was beginning to doubt its correctness. He had at present another case of spinal meningitis the etiology of which might be either idiopathic or traumatic. In this case there had been opisthotonos. This was also getting well.

DR. SMITH asked if any gentleman had had any experience with opium in meningitis. In his hands the bromides and the ordinary method of treatment had been of little avail, and he had not only had but few recoveries from any of the forms of meningitis, but had heard of but few. He intended using opium in some form in his next case.

DR. TAYLOR said that he had used tr. opii with good result in one of the cases just reported.

DR. HAMILTON remarked that he was surprised to hear Dr. Smith say that he had heard of but few recoveries from meningitis. The books were full of reports of recoveries. In the winter of 1873 and 1874 he had seen in his own and others' practice about forty cases of epidemic cerebro-spinal meningitis, and of these 50 per cent. recovered. The cases were not, of course, all of the same severity, but the diagnosis in each case was plain. They would begin with dilated pupils, opisthotonos, etc., and in many cases were followed by remarkable sequelæ, such as abscesses in back and in neck, enlarged glands, etc. Some of the patients would be dead in several hours from the beginning of the attack. At the first of the epidemic the treatment had been the usual one, bromide of potash, iodide of potash, calomel, etc. But on looking up the literature of the subject in an old book published in 1811, he had found recommended hot baths, non-stimulating forms of the diuretics, ergot and aromatic spirits of ammonia. This plan was at once adopted and many cases recovered.

DR. MAGRUDER related the case of a child he had been called to see, who had been ailing and losing flesh for some months. There was a history of phthisis on both its father's and mother's side. There had been constant vomiting and diarrhœa for some time. When first seen it was in convulsions; warm mustard baths, blisters, calomel and bromide of potassium with chloral relieved it from these and they never returned. There was strabismus of one eye, convulsive movements passing over the whole body, and the fingers were contracted on palm. Jactitation was marked, while there was deep coma. This condition lasted for a week, the same treatment being continued. The vomiting stopped. On the eighth day the child began to show some consciousness, but was totally unable to move limbs. In a month the strabismus and contraction of the fingers on the palm were better, but both would increase on excitement. He put her on emulsion of cod-liver oil, and in six months she was able to walk, having had to learn this over. The family then removed from the city, but letters told him that the patient was doing well, but that any excitement brought on violent jactitation. Eighteen months after the sickness the child was operated on to rectify the strabismus, but without much success. The child is at present perfectly healthy in appearance, but her memory is defective, she is very nervous, and the strabismus continues. Has taken cod-liver oil all along. Dr. Magruder thinks that, considering the history of tuberculosis in both parents and the symptoms present in this case,

he is justified in calling this a tubercular meningitis.

In his dispensary practice, also, he has had several cases much benefited by counter-irritants, iodide of potassium and mercurials. The iodide must be given in fairly large doses, gr. x t. i. d. He mentioned a dispensary case which had dilated fontanelle and convergent strabismus. This child was able to walk, but not getting any better he had called in Drs. Burnett and Marmion. The child finally became entirely blind and the head increased in size. The child's mother had annoyed him greatly by begging on the streets and telling people that her child had been made blind at the Dispensary.

DR. SMITH asked Dr. Magruder if he considered a case of meningitis cured when the child was left blind and with a weak mind?

DR. MAGRUDER replied that he did so far as the meningitis, the lesion he was called on to treat, went.

DR. W. W. JOHNSTON said that it would be well to define the kind of meningitis talked about. It is a concomitant of so many states that such a question as Dr. Smith asked first becomes a pertinent one. Simple meningitis gets well. *Cerebro-spinal fever* is not meningitis, but a specific disease, and he believed the cases reported by Dr. Hamilton to be of this kind. The treatment he had used so successfully was addressed to the general symptoms, and in reality meningitis does not always occur in these cases. He had seen cases with symptoms such as Dr. Hamilton mentioned, notably in a family of refugees during the war. Several members died in rapid succession, some in a few hours from the first symptoms. On one or two appeared the purpuric spots which give it the name of *spotted fever*. There may be meningitis in Bright's disease, and tubercular meningitis is merely a symptom of general tuberculosis. When there are tubercles enough in the brain to produce these symptoms the cases die, and tubercle will be found in other organs.

In the case reported by Dr. Magruder of a girl recovered from tubercular meningitis, he does not consider her cured except of one single lesion, for there remains a weak mind and convulsions. The doctor has tried counter-irritants, calomel, iodide and bromide of potash, ice to the head, etc., but where he was sure of his diagnosis of tubercular meningitis the patients never got well. If they did get well it militated against its being tubercular. He said that he had noticed as one of the earliest symptoms that the patient began to stutter. Where a child had previously been talking all right it began to stutter and hesitate or remain silent. This comes before the constipation and other initial symptoms in many cases.

DR. HAMILTON said that he was aware that there was a difference between *cerebro-spinal fever* and *simple* and *tubercular meningitis*. They must, however, be very much alike, for many of the post-mortem appearances are the same in the two. J. Lewis Smith used synonymously cerebro-spinal fever, spotted fever and cerebro-spinal meningitis. It is also termed epidemic cerebro-spinal meningitis. In addition to the sequelæ already mentioned by him paralysis may follow; differing, however, from that which follows scarlet fever.

DR. HARTIGAN asked Dr. Fry if there had been any jaundice in his case? Dr. Fry said there was none. Dr. Hartigan stated that in several cases he had observed this symptom, and he thought that he had been able to trace its source to the fact, which he had verified in several post-mortem examinations, that there was a deposit of tubercles around the bile ducts. As Dr. Johnston stated, tubercular meningitis was merely a symptom or accompaniment of general tuberculosis, which, when it attacked the brain, began at the base about the fissure of Sylvanus. The cerebellum and pons may also be attacked in the form of a yellow mass or tumor. Dr. Hartigan said that his treatment was generally with the liq. hydrarg., bichloridi and general hygiene. Iodide of potassium and iodoform were also recommended for their absorbent effect. There did not seem to be enough disease in the brain exhibited to account for the rapid death, and if the post-mortem examination was extended, this would likely have been confirmed.

DR. W. W. JOHNSTON said that he did not mean to correct Dr. Hamilton's pathology, but he still thought himself right in saying that cerebro-spinal fever is not a meningitis.

DR. HAMILTON said that in the beginning he had asked Dr. Smith to what form of meningitis he was alluding when he (Dr. S.) remarked that he knew of but few cases of meningitis which got well. Dr. Smith had replied *all* forms, and he (Dr. H.) had accordingly mentioned the above cases which he believed to have been meningitis. He had not in the course of his remarks alluded to tubercular meningitis.

DR. MAGRUDER said that he had seen iodoform recommended in the London *Lancet*. Here the scalp had been shaved and an iodoform ointment applied. Coryza had followed in a few days, and the ointment was given up.

DR. BOARMAN asked Dr. Fry if his case had scrofula? He had lost several cases with this struma. He had also observed the *tâches meningitiques* in several cases. Dujardin-Beaumetz recites a case of recovery from tubercular meningitis

DR. BERMANN said he did not believe that an absolute diagnosis of tubercular meningitis could be made without a microscopical examination. He had had his attention called by a physician in London to the bright red and shiny appearance of the tip of the nose as one of the early symptoms of tubercular meningitis.

DR. HARTIGAN said that the disease might be differentiated by ophthalmoscopic examination. If tuberculous, the so-called "cloudy swelling" or "tuberculous inflammation" of the retina might be found.

DR. FRY, in closing the discussion, said that he had hoped some one would have mentioned the hemiplegia which was an interesting occurrence in his case. In reply to Dr. Boarman he would state that his case was not scrofulous. Hanoch mentioned that in acute tuberculous cases where calomel was used the patient might apparently get well, but there would be relapses and finally death. The post-mortem in such cases showed successive crops of tubercles and adhesions. He did not think that Dr. Magruder's case was tuberculous.

Stated Meeting, May 12, 1886.

THE PRESIDENT, C. H. A. KLEINSCHMIDT, M.D., IN THE CHAIR.

T. E. MCARDLE, M.D., SECRETARY.

DR. J. FORD THOMPSON presented the

SAC OF AN OVARIAN CYST

recently removed by him at Garfield Hospital. He presented the specimen to the Society on account of the size of the tumor and the condition of the patient. He saw the woman, with Dr. D. R. Hagner, more than two years ago. The tumor was then very large, and had been growing for a number of years. He advised an operation for its removal, but his advice was not heeded. She spent the last two years and a half in her room knitting and doing some light sewing. Some weeks ago Dr. Hagner again requested him to see her in the hope of giving some relief by tapping, as a radical operation was considered out of the question on account of the woman's condition. Dr. Thompson, however, advised an operation for the removal of the tumor, and she was sent to the Garfield Memorial Hospital on the following day. A consultation was held and it was decided to operate as the only chance of saving the patient's life. Dr. Thompson feared complications, and the irregular shape of the tumor gave him some uneasiness, as he was uncertain as to its partial solidity. The operation was performed on the afternoon of May 4, 1886. There were no adhesions or complications of any kind. The tumor, which had appeared on the patient's left side nine years ago, when she was 47 years old, and seven years past the menopause, was found to be a multilocular cyst weighing 40 pounds. The fluid contents weighed 38¾ pounds. The contents of the smaller cysts were, as usual, of a thicker consistency than the contents of the large cyst.

He ligatured the pedicle with silk and cut it with the thermo-cautery. The stump was dropped into cavity and three rows of sutures closed the abdominal wound, which was only three inches long. There was no shock, and the pulse and respiration improved immediately upon the removal of the tumor. She slept well all night, and to-day, the eighth after the operation, she says she is feeling splendidly. The sutures were removed this morning. The only complication has been an increase of temperature for several days, which Dr. Thompson considered due to the removal of pressure from the circulation, for there is no symptom of any other local or constitutional disturbance.

DR. J. TABER JOHNSON said he was glad Dr. Thompson had operated successfully upon a patient in such a low condition, for it would serve to encourage other surgeons and patients. It was remarkable that so large a tumor could be removed through so small an incision. We all know, however, that the smaller the incision the greater the safety to the patient; provided, of course, that it be not so small as to be bruised by the removal of the tumor. Three weeks ago he had removed an eight pound tumor through an incision two and a half inches long, and indeed two inches would have been long enough. The patient has had no trouble other than stitch-hole abscesses and a slight burn from the thermo-cautery. Otherwise she has suffered no pain at all. By severing the pedicle with the thermo-cautery, its raw surface is prevented from becoming attached to the intestines, omentum, or pelvic peritoneum. He related a case in his own practice where the pedicle had become attached to the peritoneum, though other causes accounted for the death of the patient. In some cases of ovarian cyst the fluid is so thick that it is with the greatest difficulty fluctuation can be obtained. On Friday last he opened a woman's abdomen expecting to find a fibro-cystic growth. It proved, however, to be a cyst with walls varying from an inch to four inches in thickness. The fluid weighed only eight pounds, whilst the sac weighed twenty. He was compelled to make an incision more than six inches long. He desired to call attention to one other remarkable point in Dr. Thompson's case, namely, the length of time the woman had suffered; for three years is considered the average number of years a patient will live with such a tumor.

DR. THOMPSON wished to add one remark concerning diagnosis. There was a peculiar sensation rather than a sound which he had detected several times in examining patients with large ovarian cysts. He could not describe it better than by saying it felt as if something slipped, almost producing a noise. Of course it was nothing more than the movement of the cyst against the parietal peritoneum. He believed it had some influence in deciding the question of a previous peritonitis. Whenever it was present in his cases there had been no adhesions. When the sensation was absent adhesions had been found.

DR. SWAN M. BURNETT presented

A SARCOMA OF THE EDGE OF THE ORBIT AND THE EYELID.

Also,

A MODIFICATION OF THE REFRACTION OPHTHALMOSCOPE.

DR. RICHEY thought the modification ingenious, simple, and useful.

DOMESTIC CORRESPONDENCE

"POTASSIUM CHLORIDE."

(Kali Chlorici, Merck, Darmstadt.)

TO THE EDITOR OF THE JOURNAL:

I have read with great interest Dr. Pattee's article in THE JOURNAL of July 24, concerning potassium chloride. The notoriously bad results following the use of potassii chloras have induced me to make use of the milder and more efficient preparation of kali chlorici.

For some years I have used this preparation with satisfactory results. I have repeatedly endeavored to bring this remedy to the notice of the medical profession. In the *Medical News* of May 19, 1883, I called attention to its valuable properties, especially as a remedy in various forms of throat diseases. In the *Philadelphia Medical Times*, of July 28, 1883, I

again endeavored to bring it into notice, and lately, in the *New York Medical Journal*, of May 8, 1886, I have urged its employment in the treatment of diphtheria.

I have found it difficult to explain to medical brethren that such a preparation really does exist, and that it is very different, in the action at least, from the harsher and less reliable preparation of the chlorate. The use of kali chlorici in Germany has won for it great favor, and it has certainly proved itself more valuable than the older and rougher preparation of the chlorate.

I find the following a convenient formula for its use:

℞ Kali chlorici (Merck's)..... ℥iv
Syrup, simple..... ℥vi
Aquæ distil..... ℥vi M
S. ℥vi every hour.

Very often the action of the chlorate of potash will seem decidedly poisonous, but the milder chloride will be found very useful and valuable. The imported preparation is the one I always use.

W. THORNTON PARKER, M.D.

Newport, R. I., August 3, 1886.

BOOK REVIEWS.

DICTIONARY OF PRACTICAL SURGERY by various British Hospital Surgeons. Edited by CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College. Vol. I. Abdomen — Lymph-Scrotum. pp. 970; Vol. II. Macroglassia-Zygoma, pp. 884. Bound in one large 8vo. Volume. Philadelphia: J. B. Lippincott & Co. 1886.

This dictionary, which is as good as Quain's "Dictionary of Medicine," is made for that much protected and long suffering individual, the busy practitioner. Under the editorship of Mr. Heath, and with so many good surgeons to assist him the work could not be otherwise than good. An extended notice of such a work is obviously out of the question.

A MANUAL OF PRACTICAL THERAPEUTICS, compiled with Reference to Articles of the Materia Medica. By EDWARD JOHN WARING, C.I.E., M.D., etc. Edited by DUDLEY W. BUXTON, M.D., etc. Fourth Edition. 8vo., pp. XIX, 666. Philadelphia: P. Blakiston, Son & Co. 1886. Chicago: W. T. Keener.

Thirty-two years have elapsed since the first edition of this work appeared. Necessarily many changes have been made in that time, in drugs, in medicine itself, in the manner of giving drugs. The book has been correctly named "A Manual of *Practical* Therapeutics," for it is essentially practical, but in no sense a mechanical work for mechanical men. There are no formulæ of impossible compatibilities; one drug is taken up, its therapeutic applications considered in as few words as possible, and the drug next in alphabetical order is taken up. It is well indexed, both by diseases and drugs.

FRACTURES AND DISLOCATIONS. By T. PICKERING PICK, F.R.C.S., Surgeon to and Lecturer on Surgery at St. George's Hospital, etc. 93 Illustrations. Small 8vo., pp. VIII, 524. Philadelphia: Lea Brothers & Co. 188-?. Chicago: A. C. McClurg.

This is one of the Clinical Manuals for practitioners and students, which are being issued by the publishers, and thus far can certainly be placed at or very near the head of the list as regards its value. No one could expect that so small a book could be placed in competition with the classical work of the late Dr. Hamilton; but for all that it is an excellent book, of a most convenient size, well printed. The only possible objection to it and others of the series is that the blue of the cover is not fast. It is well illustrated, many of the illustrations being new and drawn from specimens in St. George's Hospital.

AMERICAN MEDICAL ASSOCIATION.

FORMED IN 1846.

Next annual meeting will be held June 7th, 8th, 9th, and 10th, 1887, in Chicago, Ill. President, E. H. Gregory, M.D., St. Louis, Mo. Permanent Secretary, W. B. Atkinson, M.D., Philadelphia, Penn. Assistant Secretary, J. Nevins Hyde, M.D., Chicago, Ill. Treasurer, Richard J. Dunglison, M.D., Philadelphia, Penn. Librarian, C. H. A. Kleinschmidt, M.D., Washington, D. C. Chairman of Committee of Arrangements, Charles Gilman Smith, M.D., Chicago, Ill.

All membership dues should be sent direct to the Treasurer, RICHARD J. DUNGLISON, M.D., lock box 1274, Philadelphia, Penn.

MISCELLANEOUS.

BRITISH MEDICAL ASSOCIATION.—The fifty-fourth annual meeting of the British Medical Association seems to have been one of the most successful ever held. The Address of the President, and Addresses in the Sections were able, and most interesting. The visiting medical men from America were cordially received. "The proceedings," says the *British Medical Journal*, of August 14, "were greatly heightened in interest by the attendance of a delegation from the International Medical Congress, to be held in America, at Washington in September, 1887, to present an invitation to attend the Congress to the members of the British Medical Association. There have been some considerable internal dissensions among the organizers of this Congress, but it was very generally felt that this ought not to and could not prevent the invitation from America from receiving a cordial acceptance. This invitation, which was made at once in the name of the International Medical Congress by its President-elect, and of the American Medical Association by some of its principal officers, was received with that sincere and affectionate cordiality which both the purport of the mes-

sage and the sources from which it came already assured for it in advance. It lost nothing of dignity or of interest in the weighty and grave words of Dr. N. S. Davis, one of the oldest and most respected members of the profession in America, and one who holds very much the same relation to the American profession as Sir Charles Hastings long held to the profession in Great Britain. Dr. Davis was practically the founder of the American Medical Association, and is its most respected spokesman. The English profession may be sure that they will receive in America a welcome of unlimited hospitality, and of boundless kindness and brotherly affection. They will see there a great country and a great profession, which has sprung up and developed with a rapidity and to an extent which the world has never seen during the life-time of many who were present to hear the invitation. In our own country, Paget, Lister, MacCormac; in France, Charcot, Trélat; and in all the countries of Europe, leading representatives of science have accepted invitations to be enrolled on the list of Vice-Presidents. In America, the President of the United States, and the great officers of State, have signified their acceptance of the offices of Patrons of the meeting; and official recognition of the highest kind, such as is naturally due to a great gathering of medical men from all parts of the world, will be accorded to those who accept the invitation to attend the first great International Medical Congress which has ever been held in the United States."

MEDICAL INSPECTION IN BROOKLYN.—The Brooklyn commissioner of health, DR. ANDREW OTTERSON, has inaugurated in that city an admirable system of medical inspection and relief in the tenement-house districts, with special reference to the diseases of infants during the heated season. Ten physicians have been appointed, each assigned to a special locality, who are instructed to search for sick children needing attention and to care for them, furnishing medicine gratuitously where parents are unable to pay for it, and at a reduced price to those who can. They are to note the condition of premises and report where sanitary improvements are needed, give advice as to healthful manner of living, urge parents to take their children into the fresh air as much as possible, and give orders on the diet dispensaries for proper food when it cannot be obtained otherwise. The salaries of the physicians ($75 a month) are to be paid out of the emergency fund. As a contrast to this beneficent movement in Brooklyn, the New York Board of appointment this year refused to allow the appropriation devoted last year to similar uses, with the result of a marked increase in infant mortality in the crowded districts of this city.—*Sanitary News*, August 14, 1886.

MEDICAL AND SCIENTIFIC NEWSPAPERS IN JAPAN.—From recently published statistics of the Japanese press it appears there are seven medical papers, with a monthly circulation of 13,514; nine relating to sanitary matters, with a circulation of 8195; and two on pharmacy. There are seven devoted to various branches of science.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 14, 1886, TO AUGUST 20, 1886.

PROMOTIONS.

Lieut.-Col. David L. Magruder, promoted to Surgeon, with rank of Colonel, July 26, 1886, vice Brown, retired.

Major Chas. T. Alexander, promoted to Surgeon, with rank of Lieut.-Colonel, July 26, 1886, vice Magruder, promoted.

Capt. Henry M. Cronkhite, Asst. Surgeon, to be Surgeon, with the rank of Major, July 26, 1886, vice Alexander, promoted.

Freeman V. Walker, of Georgia, appointed Asst. Surgeon, July 27, 1886, vice Cronkhite, promoted.

Major J. C. Baily, Surgeon, granted one month's leave of absence. (S. O. 111, Div. of the Alantic, Aug. 17, 1886.)

Major Geo. M. Sternberg, Surgeon, granted leave of absence for fifteen days. (S. O. 186, A. G. O., Aug. 12, 1886.)

Major E. Bentley, Surgeon, granted one month's leave of absence, and at its expiration to report for duty as Post Surgeon at Little Rock, Ark. (S. O. 113, Div. Atlantic, Aug. 18, 1886).

Major W. S. Tremaine, Surgeon, sick leave further extended six months. (S. O. 187, A. G. O., Aug. 13, 1886.)

Capt. L. Y. Loring, Asst. Surgeon, leave of absence granted him in S. O. 59, Aug. 2, 1886, Div. of the Pacific, extended two months on surgeon's certificate of disability. (S. O. 189, A. G. O., Aug, 16, 1886.)

Capt. B. D. Taylor, Asst. Surgeon, when relieved by Surgeon Bentley to proceed to Jackson Bks., La., and report for duty as Post Surgeon. (S. O. 113, c. s., Div. of the Atlantic.)

Lieut. Phil. G. Wales, Asst. Surgeon, relieved from duty in the Dept. of the Columbia, and to report in person at hdqrs. Div. of the Pacific for further orders. (S. O. 62, Div. of the Pacific, Aug. 9, 1886.)

First Lieut. W. E. Hopkins, Asst. Surgeon, ordered from Ft. Lowell, A. T., to Angel Island, Cal., for duty as Post Surgeon. (S. O. 61, Div. of the Pacific, Aug. 6, 1886.)

Lieut. Wm. C. Borden, Asst. Surgeon, assigned to temporary duty at Ft. Bridger, Wyo., during absence of Asst. Surgeon Crampton. (S. O. 100, Dept. of the Platte, Aug. 9, 1886.)

First Lieut. Charles F. Mason, Asst. Surgeon, assigned to duty as Post Surgeon at Plattsburg Bks., N. Y. (S. O. 113, Div. Atlantic, Aug. 18, 1886.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING AUGUST 21, 1886.

Stone, Dr. E. P., commissioned an Asst. Surgeon in the Navy Aug. 5, 1886.

Wentworth, A. R., Asst. Surgeon, ordered to temporary duty, Navy Yard, League Island, Pa.

Lippincott, G. C., P. A. Surgeon, ordered to Annapolis, Md., for temporary duty as member Medical Examining Board.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDED AUGUST 14, 1886.

Carter, H. R., P. A. Surgeon, granted leave of absence for thirty days. Aug. 12, 1886.

Glennan, A. H., Asst. Surgeon, granted leave of absence for thirty days. Aug. 9, 1886. To examination for promotion, Aug. 12, 1886.

Pettus, W. J., Asst. Surgeon, when relieved at Savannah, Ga., to rejoin station, New Orleans. Aug. 13, 1886.

CORRIGENDA.

In THE JOURNAL of August 21, in Dr. G. E. Frothingham's article on "Cocaine in Cataract Extraction," p. 205, 2d column, 5th and 9th lines from bottom, + 71 should be T + 1, and + 72 should be T + 2.

In THE JOURNAL of August 14, p. 193, second column, in the list of Vice-Presidents of the Section on Diseases of Children in the Ninth International Medical Congress, for Wm. G. Booker read Wm. D. Booker, of Baltimore, Maryland.